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# Future Fantasticals

Drawing has always been a tool to speculate on the future. It forms a surface for enacting the desires of society and proposing new ways in which architecture can facilitate them. From the seminal speculations of Archigram to Paul Rudolph's hulking megastructures in pen and Hugh Ferriss' crystalline 'Metropolis of Tomorrow', the twentieth century took drawing towards a multitude of possible futures. Most of these futures will never come to pass, but the potent power of speculative drawing continues on. If science fiction is always using the future to say something about the present, then speculative and fantastical drawings speak of our contemporary concerns. It could be the utopian desire to build the world again from scratch, or simply the making of a critical argument about today via the imagery of tomorrow – but either way, fantasising through drawing remains an evocative and seductive act.

In the following chapter, we will see work that speculates on the future of drawing as much as the future of worlds. *Future Fantasticals* takes us on a journey from Neil Spiller's singular world manifested in drawing through to the work of science fiction legend and *Blade Runner* concept artist Syd Mead. As we zoom towards the horizon, we will encounter strange machines for drawing, buildings that combine with biological creatures and cities that revel in their unrestrained scale. Within each of these projects, there is a sense of contingency, of a future that might never come into being except through the act of drawing it. Yet in each case, there is the sense that drawing as a speculative tool, with its human subjectivities and missteps, still has the power to pull us into its realm and let us dream of things to come.

Key Note	<p>142 Drawing as Communicating Vessels: An Apologia (or Not) Neil Spiller</p>
Papers	<p>149 Paradoxical Sciagraphy Nat Chard</p> <p>155 The Fall and the Rise: Lebbeus Woods' Metaphorical and Narrative Drawings Massimo Mucci</p> <p>162 Creatures Afield: Drawing the 'Dioramatic' Caricature Joseph Altshuler Julia Sedlock</p>
Projects	<p>169 The Digital Renaissance Anna Andronova</p> <p>172 New Lohachara Kirsty Badenoch</p> <p>176 The Restored Commonwealth Club Adam Bell</p> <p>178 SCALEFULNESS Kyle Branchesi</p> <p>181 The Silt House Matthew Butcher</p> <p>184 Deviated Futures and Fantastical Histories Bryan Cantley</p> <p>188 The Living Tableau Pablo Gil Martínez</p> <p>192 Speculative Morphology of Recurring Terrains Ryota Matsumoto</p>

	<div>196</div> <div>Rowhouse</div> <div>Tom Ngo</div> <div>198</div> <div>Tokyo Backup City IRTBBC</div> <div>You + Pea</div>
Contributor	<div>202</div> <div>MEGABEAM</div> <div>Syd Mead</div>



# Drawing as Communicating Vessels: An Apologia (or Not)

Neil Spiller

"Let us watch him with reverence as he sets side by side the burning gems, and smooths with soft sculpture and jasper pillars, that are to reflect a ceaseless sunshine, and rise into a cloudless sky: but not with less reverence let us stand by him, when with rough strength and hurried stoke, he smites an uncouth animation out of the rocks which he has torn from among the moss of the moorlands, and heaves into the darkened air the pile of iron buttresses and rugged wall, instinct with a work of imagination as wild and wayward as the Northern Sea; creations of ungainly shape and rigid limb, but full of wolfish life, fierce as the winds that beat and changeable as the clouds that shape them."

John Ruskin, 'The Nature of Gothic', *The Stones of Venice*

For me, the 1980s were a perfect storm of architectural education and creative inspiration. During this time, I was taught the conceptual, tasteful modernism of the Cambridge School but was really inspired by Archigram and Cedric Price; his era also coincided with the halcyon days of high-tech, architectural postmodernism, Alsopian and NATO splurge and deconstruction – a heady, eclectic mix of styles and ideas. I was also reading a lot about Victorian neo-gothic architects – Billy Burges, Goodhart-Rendel's rogues and Pugin also loomed large in my fevered imagination.

Also at the same time, while still a student, I had read an article by Charles Jencks that looked at ancient and contemporary column orders as microcosms of architectural epistemology, and asked: what might new contemporary orders look like? I picked up this idea in my diploma project and designed the *Dorian Gray Column* – a column for the foyer of an architectural school to be 'dressed' by generations of students, creating a barometer of architectural fashion and preoccupations.

Towards the end of the 1980s, a college friend and I set up a fledgling architectural practice; we were full of young men's bravado, energy and iconoclasm. The new practice's goal was to invent a new architecture, element by element. We developed a way to work as a team, yet independently – neither of us wanted to lose what we believed to be our innate talent by fully collaborating with the other. We divided up drawings and worked in a surrealist exquisite corpse sort of way. This method of working we called 'schizophrenic architecture' and it produced 'interstitial drawings' (between art and architecture). Railings, columns, monuments, tombs, lights, a gallery, exhibition designs, stage sets and even master plans for Milwaukee and Genoa followed.

As the 1980s drew to a close, and with a number of projects under our belts, we went into self-publishing

(making architectural books continues to be a preoccupation for me). We managed to convince Cedric Price to write a preface. The booklet was entitled *Burning Whiteness, Plump Black Lines* (1990). Cedric was very flattering in his writing and tried to explain to us that we didn't need to use all our architectural fruit in every architectural cake we baked. Like 1980s heavy metal guitarists, we liked a good 'noodle' up and down the fretboard. But Cedric was talking about architectural blues – slower, more emotional, with space between the architectural notes: "There is no lack of richness but the resultant 'cake' may contain too much fruit. Accepted disciplines of cost and timing are not ignored but too often add to the mix rather than refine it. This is not so much a criticism as a suggestion that future works need not use the whole palette all the time. The avowed 'Search for Architectural Language' could well be a task left to the grateful receivers of this intelligent, delightful practice. I for one will be watching".<sup>1</sup>

The early 1990s were marred by economic recession, but *Burning Whiteness...* brought us some notice and regard. In particular, it brought us to the attention of Peter Cook, who was just assembling a teaching team to rejuvenate The Bartlett School of Architecture. After a few years, my practice disintegrated and I was on my own again; but thrown into the creative turmoil that was The Bartlett, my drawn work changed – it embraced colours and evolving technologies, such as cyberspace and nanotechnology, and it became more informed by surrealism and science fiction writing. I also started to write about spatial ideas and technology. This writing became my book *Digital Dreams – Architecture and the Alchemic Technologies*, written between 1993–95 and published in 1998. I was already teaching about the architectural ramifications of new technologies on architectural design at The Bartlett in my diploma unit.

*Digital Dreams* featured projects that included *The Alchemist's Church* and the first panel of the *Genesis to Genocide* triptych. This triptych was a harbinger of another phase in my architectural trajectory – a return to a series of black and white Rotring pen drawings exploring protein geometries, DNA ribbon models, surrealism, Bosch and the impact of technologies on human bodies.

In 1992, *AD* invited us to exhibit in the *Theory and Experimentation* exhibitions. This was the first time my work was shown alongside some of my idols – including Lebbeus Woods, Peter Cook and Himmelblau – which was a great thrill. After this exhibition, I remained in close contact with *AD* and was asked in 1994 to guest-edit an edition with Martin Pearce, *Architects in Cyberspace*. This was the first international established journal to

explore these issues. A series of guest-editorships of *AD* have followed. In 1998, I was asked to collate a monograph on my work to date – *Maverick Deviations*. This was again another cathartic moment in my career, and a celebration of my greatest hits to date.

After *Maverick Deviations* was finished, it heralded the beginning of a new project, one I'm still pursuing: *Communicating Vessels*. I have always admired architectural theoretical projects that were long-term, open-ended and speculative, such as Mike Webb's *Temple Island*, Ben Nicholson's *Appliance* and *Loaf Houses* and Daniel Libeskind's *Micromegas*, *Chamber Works* and *Theatrum Mundi* – projects not borne out of the financial expediency of traditional practice but full of the prima materia of architecture. *Communicating Vessels* was to be my contribution to this canon; it began in 1998 and runs to this day. Everything I have drawn and designed in the last twenty years is part of this project; it now consists of around a thousand drawings and thousands of words of text.

*Communicating Vessels* is a rumination on the impact of twenty-first-century technology on architectural space and materiality. It is also a personal memory theatre, a surreal contemplation on the house/garden dialectic in the contemporary world and a meditation on reflexive space and augmented reality. The project re-examines traditional paradigms and elements of design such as the house, gazebo, garden shed, walled garden, birdbath, entrance gates, riverside seats, love seats, vistas, sculptures, fountains, topiary and outside grown rooms, among many other objects and spaces. It redesigns them, electronically connects them, explores their virtual and actual materiality and their cultural and mnemonic importance, and reassesses them in the wake of the impact of advanced technology and the surreal protocols of contemporary architectural design in the twenty-first century. The project was initially conceived as a set of objects set in a psychogeographic landscape that resonated with my youth – a very small island in the River Stour, two and a half miles outside Canterbury in Kent, near where I was brought up. So it is an island of memories, of hot sunshine bicycle rides, burgeoning sexuality, secret underage beers and illicit 1970s liaisons. The site exists simultaneously both geographically and in my memory.

As I have written: "*The Island of Vessels (Communicating Vessels)* is a huge chunking engine, a communicating field, full of witchery and sexuality. Its neurotic things are 'pataphysically enabled and surrealistically primed. The island's geography is cyborgian and always teetering on the edge of chaos. Its groves and glades are haunted by ghosts, some impish like Alfred Jarry, some nude on staircases, some with Dali-esque moustaches and some muttering about defecating toads. On the island lives a Professor – a madman, an idiot savant or a genius – perhaps all three. The Professor is attempting to work out the shock of the new, its architectures and its desiring poetics. The Professor likes his things – they tell

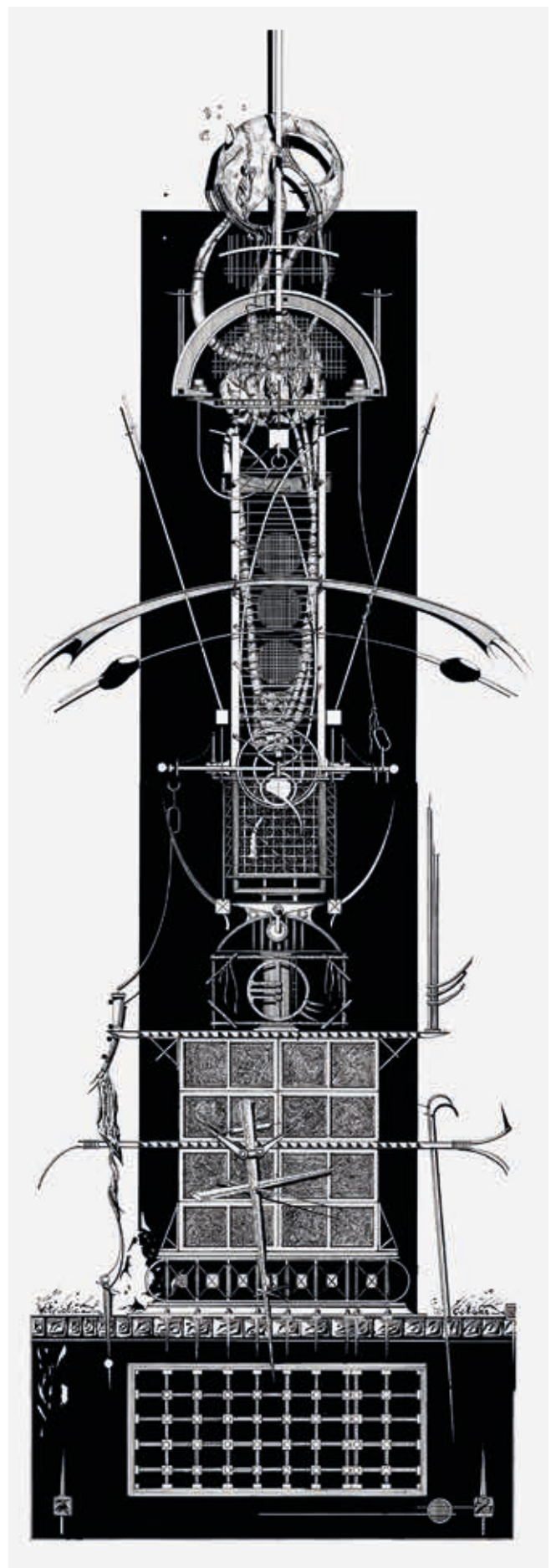


Fig. 1: Spiller Farmer Architects, *Vitriolic Column*, 1986.

him where he's been and where he is. He dwells in this world and builds in it everyday, without fail. He works at the intersection of art, architecture and science. He uses desire as a welding torch and the pen as a scalpel. Like Duchamp's *Handler of Gravity*, he likes to surf on precarious and fleeting equilibriums".<sup>2</sup> initially, the first ideas for the project were about the simultaneity of forms in different fields and the embroidering of architectural space through various scales of technology. So the first phase of *Communicating Vessels* was in developing surreal reflexive systems that utilised the virtual, the nano and the chance dynamics, both within the site and further afield.

The assorted architectural tableaux are powered by mysterious grease, a nanotechnological substance, highly flammable, created within desiring machines. Desire is the other great motivational force on the island, alongside memory. This is the celebration of the marvellousness of desire fuelled the Surrealists' creative odyssey.

Another cathartic moment occurred late in 2012, when my friend Lebbeus Woods died. Lebbeus had championed my work since I first met him back in the early 1990s. I set about weaving my memories of Lebbeus into *Communicating Vessels*. This resulted in *The Walled Garden for Lebbeus* and coincided with a massive outpouring of work that galvanised the *Vessels* project further.

"Initially, there were only a couple of drawings of the Garden; over the past year, these have blossomed into a suite of twenty-five or more. I wanted the Garden to channel all manner of architectural ambiances and make

some familiar quotes, not only from my architectural lexicon, but also from Leb's, Aldo Rossi's *Moderna Cemetery* and OMA's *La Villette* Competition entry. October 30th was also the day Hurricane Sandy ripped through New York, where Leb lived (this is not to suggest that the two events on the same day were connected). As the year has progressed, a series of ideas has evolved in the work, mainly about the choreography of augmented reality and gravity gradients over time. I wanted the Garden to have another virtual side, a side that would augment the simple world of walled space, trees, conic forms and statues I had created. This I saw as a new area of architectural detailing, one barely explored by contemporary architects. I wanted the drawings to explore this juxtaposition of virtual and actual, of points of view, ghosts, light and black."<sup>3</sup> The garden is presided over by a statue of Electra, the back of whose head is hollow. It is through this hollow, if one's head is placed within it, that one can see and hear a storm rising and abating, formed of augmented reality vectors.

The Garden has a frustum within it, consisting of an upper and lower chamber. The upper chamber is an homage to Piranesi's Plate IX of the *Carceri* and Bocklin's *Island of Death*. The lower chamber is reflexively linked to moving figures in the upper chamber that dodge the storms, real and augmented, as they pass over the open top of the frustum. This movement above activates grease below and it starts to create a surreal tableau of *Leda and the Swan* – another myth beloved by the Surrealists.

By 2015, it was clear that it was time to start to design the major piece of the constellation, the Professor's house,

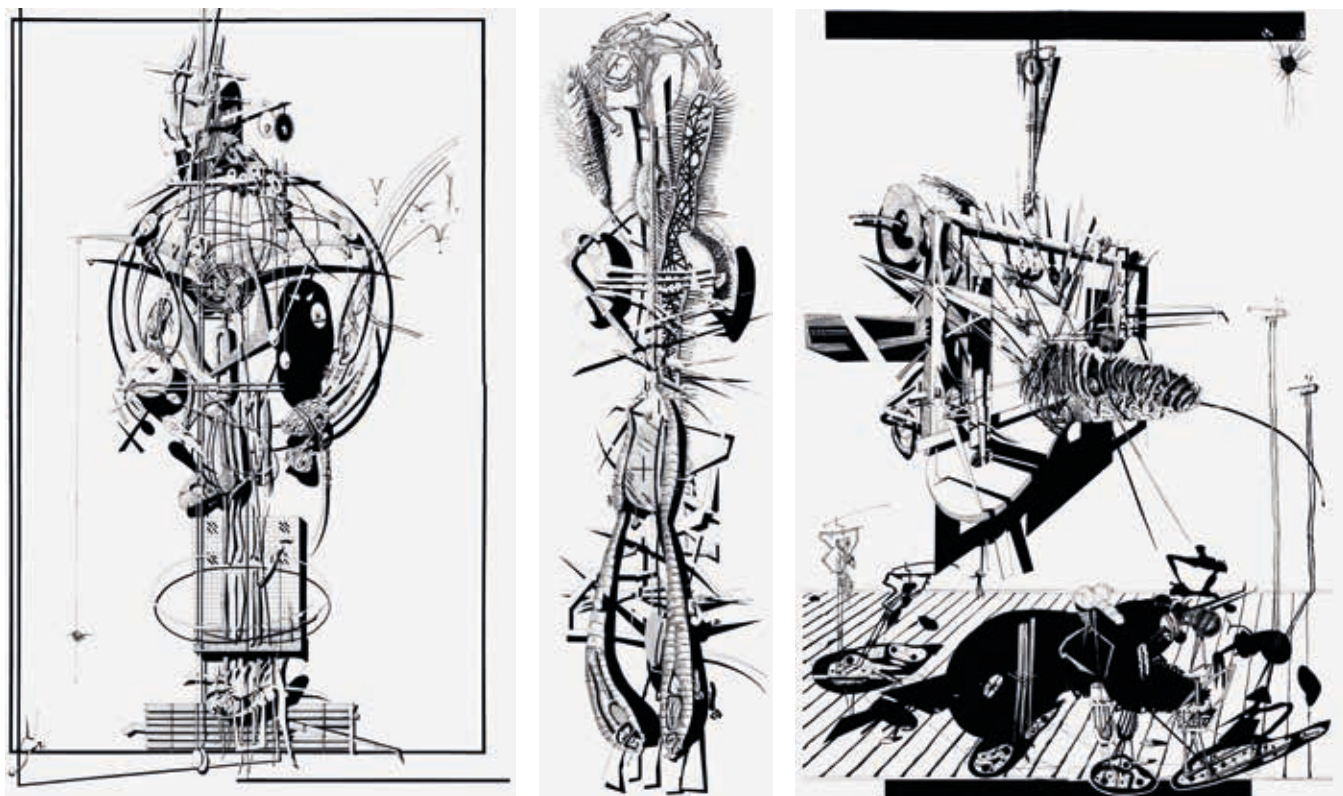


Fig. 2: Neil Spiller, *Genesis to Genocide*, 1995.



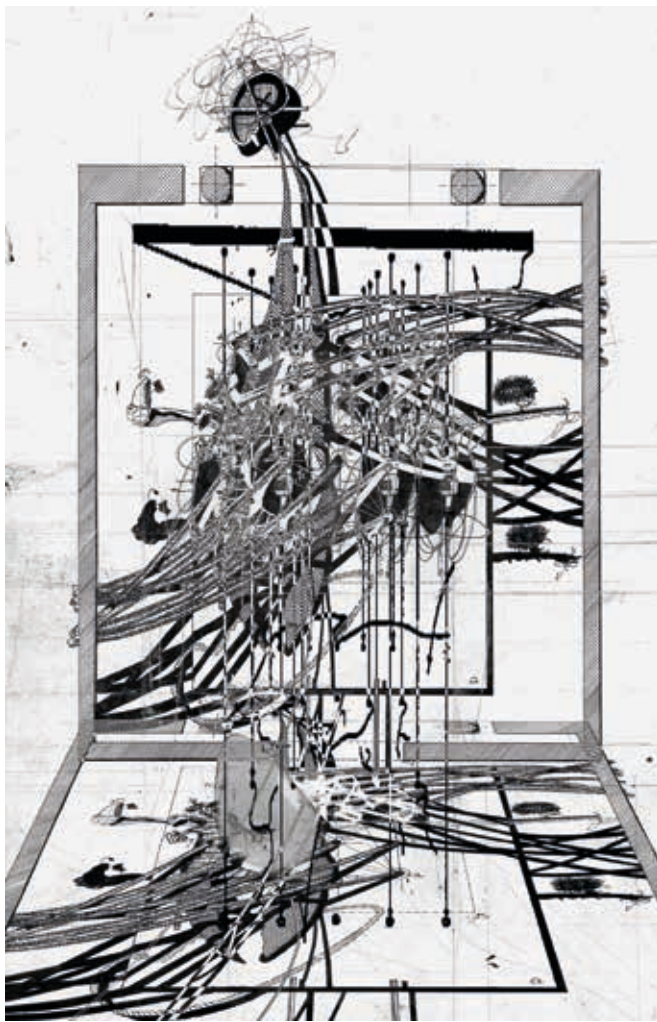


Fig. 3: Neil Spiller, *Communicating Vessels, Genetic Gazebo*, 2005.



Fig. 4: Neil Spiller, *Communicating Vessels, Genetic Gazebo*, 2005.

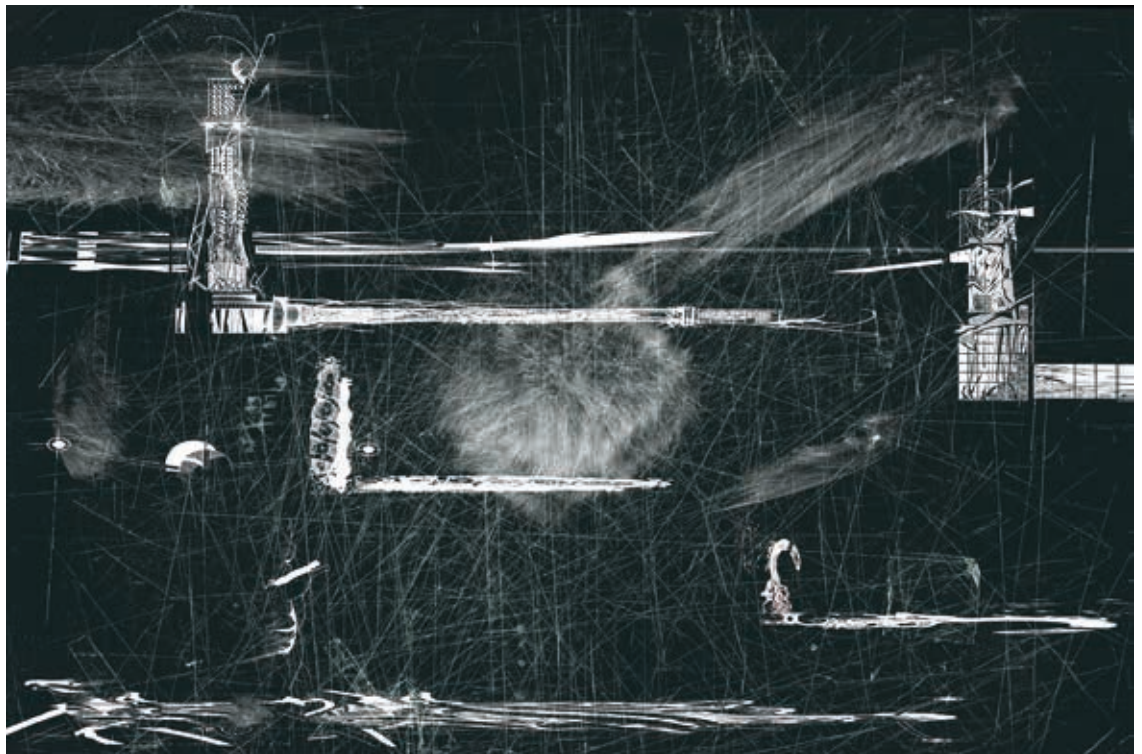


Fig. 5: Neil Spiller, *Communicating Vessels, The Walled Garden for Lebbeus – Ballard of Crafty Jack*, 2013.



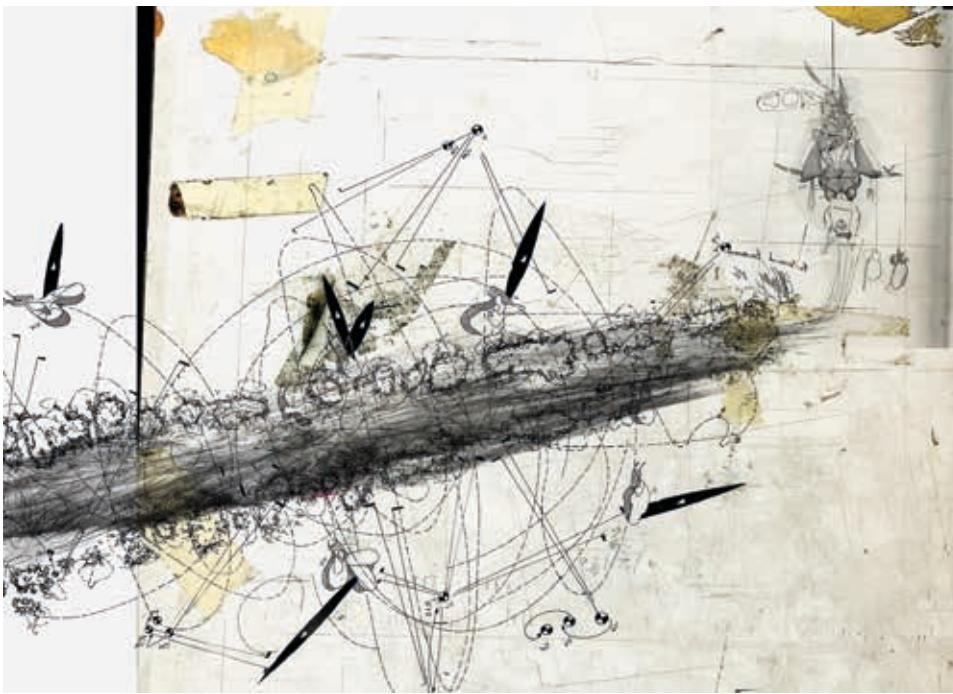


Fig. 6: Neil Spiller, *Communicating Vessels, Baronesses Filaments*, 2008.

which had by then become called the *Longhouse*. It is a *pyrtaneion*, a place of surreal banquets inhabited by ghosts, dreams, desires and mythic creatures; a memory palace of shifting relationships, momentary flutterings, cartographies and trajectories, where objects have the same accountability as people. It is a place of flame, of heat, of a rotten sun, of dusk and dawn, where the vertical is assimilated into the horizontal and where modernism breaks down. The *Longhouse* is a highly reflexive and responsive series of spaces and relationships. The house choreographs itself and develops this daily choreography by reading its site; this site is a virtual changeling site.

The traditional lexicon of tactics that architects use to place their works in the context of specific sites – how they respond to the *genius loci* – has been radically augmented by myriad new, virtual and reflexive technologies. Changes are upon us; the vista has changed, is changing and constantly changes. Cyborgian geomorphology is a movable feast and here to stay. Permanent architectural context, material sympathies and synthesis, massing, phenomenological and anthropocentric sensitivities are now imbued with the accelerating timescales of virtual and chemical metamorphosis, combined with the virtual choreography of chance. Both positions of, and the nature of, objects and architectures are conditioned by mixed ontologies, scopic regimes, numinous presences and reversible time. This reversible time stalks objects and disturbs their gentle entropy and peaceful rest. The vitality of architecture has increased a thousand-fold. To the twenty-first-century agile architect, these disruptive technologies breathe new life into the language of architecture. The verbs of architecture are being recast.

Time-based sensitivities are mixed in the cauldron of the virtual world, seen by augmented eyes enhanced by dimensions of chronological slippage, coalescing

in a digital dance above and beyond the pragmatics of actuality. This is a house of augmented reality, nano-enabled ghosts and mythic chimeras whose movements are cross-programmed with the house's sites, both real and imagined.

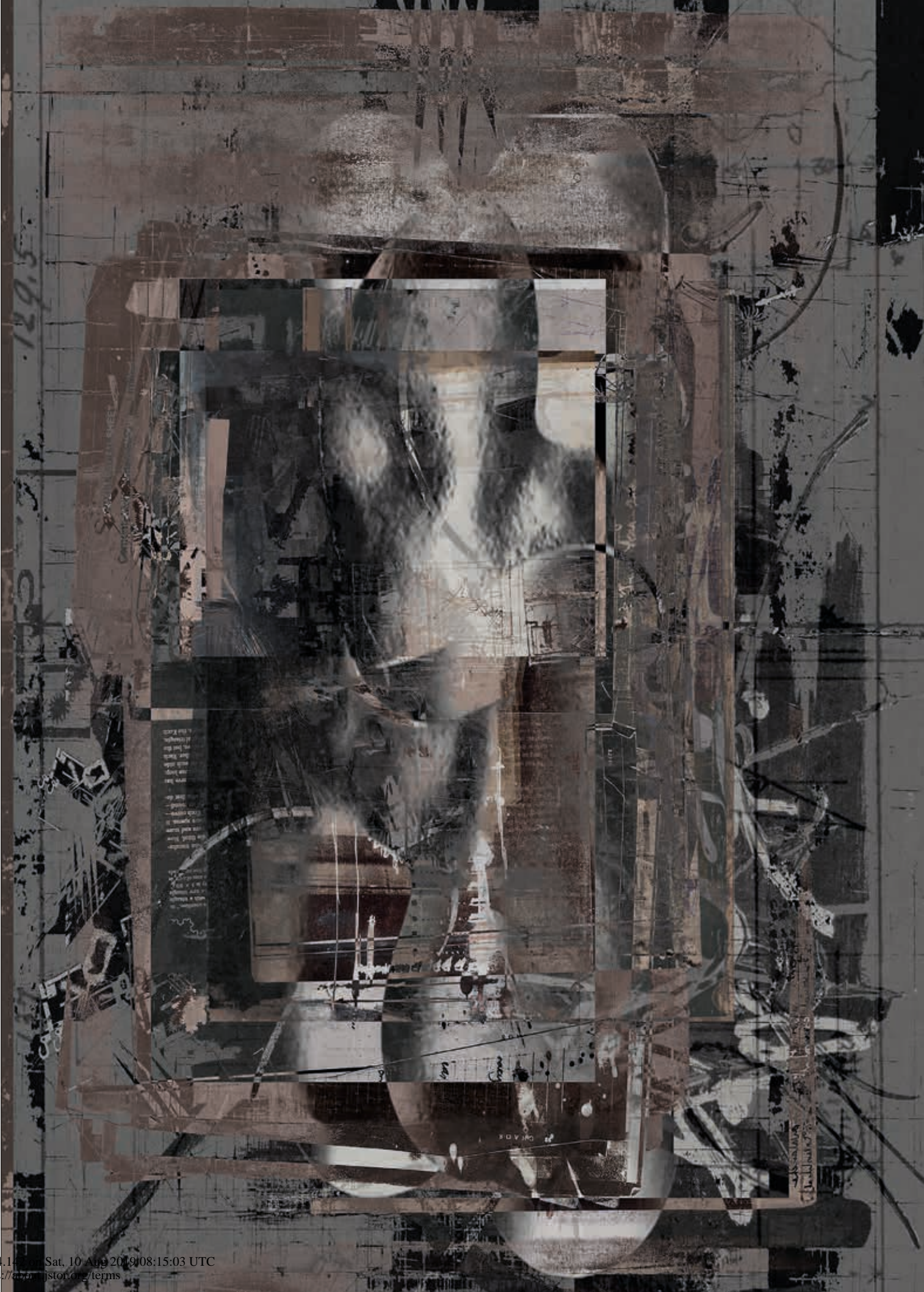
The house interiors are yet to be fully designed; this is my next task.

What drives some architects to make drawings/models of architectures that are clientless and therefore unbuilt or currently unbildable? Firstly, the commercial world of architecture is a world of value engineering, of committee consent and limited material palettes – a world that is highly legislated and therefore often normative and often, arguably, having lost its lifeblood, ARCHITECTURE. What is architecture, and can it be held within a drawing/model as well as a building? Architecture is the 'mother of all arts'. It is a synthesis of poetry, fine art, sculpture; it flows over time like music and its spaces have establishing vignettes, oscillate across the scales (from macro to micro) – and have a *dénouement*, as in film or prose. One could go on. Above all, architecture is the manipulation of space, in all its manifestations. Space can be both imagined and graphically represented.

Indeed, as our world sails headlong into culturally, demographically, ecologically and technologically uncharted waters, we badly need our ability to speculate about the future of our discipline and its centrality to society. This is not utopian, and it is not something that the prevailing capitalist mentality often encourages. This is shortsighted and could potentially cost us our whole discipline.

Fig. 7 (opposite): Neil Spiller, *Longhouse Hecate both within and without*, 2015.







A good architectural drawing is about, on one level, what one leaves out. A very good architect over the years develops a series of personal protocols and idiosyncrasies that have connected histories and evolutionary metamorphosis from one drawing to the next. This is also true for buildings as much as it is for drawings.

Our era will hopefully be seen as being responsible for the blossoming of the virtual word and the beginning of a sustainable world. We are here, now, to find and achieve positive outcomes – and to this achieve this, we need to speculate to accumulate.

This is what I have done and will do. Simultaneously, my day job is making students see the same but different opportunities in this bizarre but beautiful world. All my work is connected in the massive Communicating Vessel of my mind. It's a life's work and I make no apologies for it! It's what architects should, but seldom, do!

<sup>1</sup> Spiller Farmer Architects, *Burning Whiteness, Plump Black Lines – A Search for Architectural Language* (London: Spiller Farmer Publications, 1990).

<sup>2</sup> Neil Spiller, "The Poetics of the Island of Vessels in Drawing Architecture", ed. Neil Spiller, *Architectural Design*, Sept–Oct 2013, 112–119.

<sup>3</sup> Neil Spiller, "Detailing the Walled Garden for Lebbeus", in *Future Details of Architecture*, ed. Mark Garcia, *Architectural Design*, July–Aug 2014, 118–127.

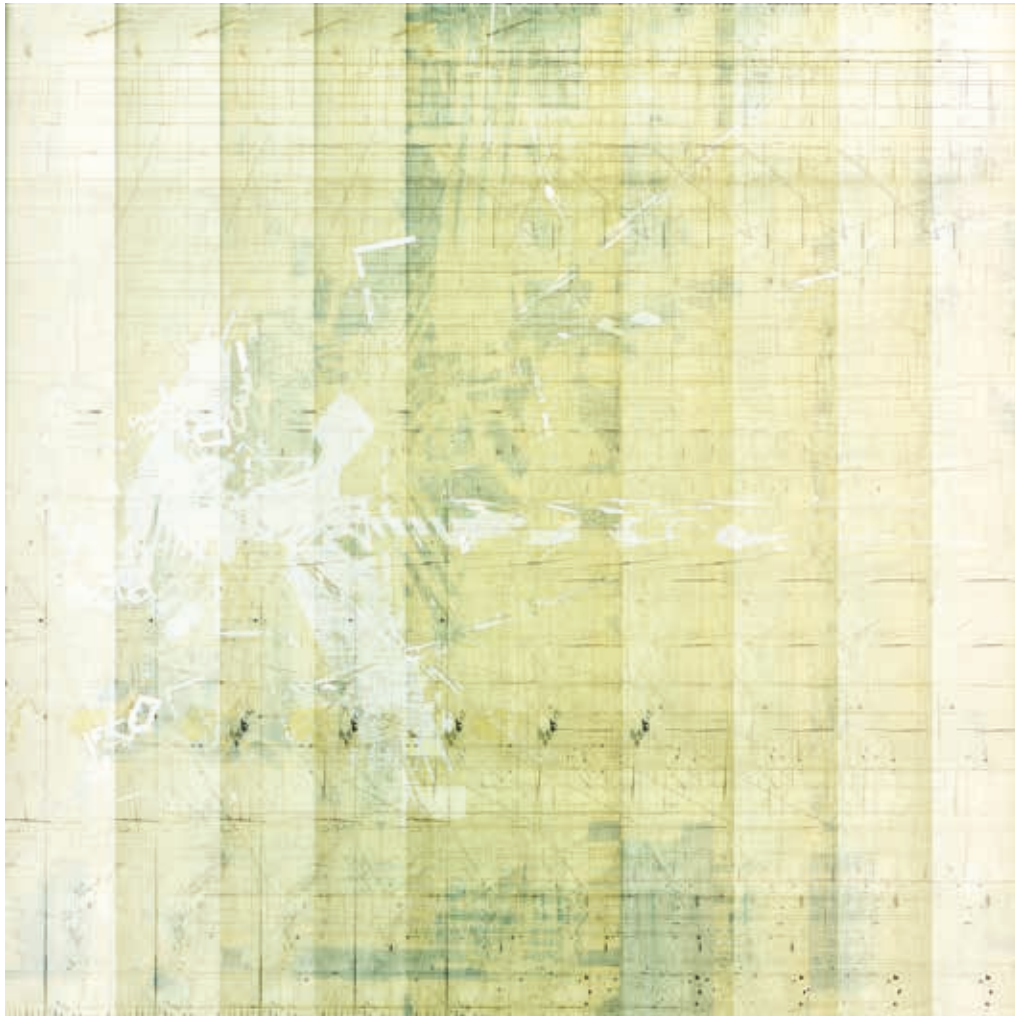


Fig. 8: Neil Spiller, *Longhouse Figured Ground Plan*, 2015.

# Paradoxical Sciagraphy

Nat Chard

The conventions of architectural drawing concentrate on things we think we know – what will take place, what the architecture will be made of or what it will feel like to be there, for instance. The question discussed in this paper is how to draw those aspects of architecture of which we are less certain – the sublime, uncanny and indeterminate occurrences that are also significant parts of our lives.

One of the main ways in which we are implicated in the content of a drawing is through interpretation. Typically, architectural drawing leans heavily on the conventions of contract drawings, where there is a legal imperative for all parties to understand the drawings in exactly the same way. Their rigour is in denying any interpretation other than that of the drawing's author. This project therefore seeks other methods of drawing so that the observer might be implicated in the drawing's content, especially by spatialising the drawing. From earlier research looking into work which plays between material and pictorial space (especially natural history dioramas), it became apparent that two promising agents in such a construction would be anamorphosis and folding the picture plane.

The research described in this paper covers a sequence of attempts to build an apparatus to draw uncertain conditions. Early instruments play with the mechanisms of optical projection, especially the picture plane. Since at least Leonardo,<sup>1</sup> artists have curved the picture plane to establish veracity in their images. If folding the picture plane has such a capacity, it must also have the potential to act as a critical agent. The first three instruments worked with projection through light, and on their original terms they were successful. While the folding picture planes allowed for a critical reception of the projection, the instruments revealed that the original terms were not the most precise site of inquiry. The instruments demonstrated the idea but the author was in complete control, in a condition of certainty.

The potential of the folding picture plane was promising, but light proved too unwavering in its physics. To address this, latex paint replaced light as the medium of projection. Latex paint is a non-Newtonian fluid like blood, for which forensic scientists have digital and analogue means of divining the narratives of blood-splatter.<sup>2</sup>

Instead of the projection holding the figure of the object – as with an object and its shadow – thrown paint (standing for occupation) would hit a model (representing the architecture) and the resulting splatter would discuss the coincidence of the two for a particular occurrence. The model is part figurative but also acknowledges that it will be occupied by flying paint. A folding picture plane collects the splatter.

A sequence of instruments works out how their various parts can be tuned so that the splatter (a sort of shadow),

along with high-speed photography, could reveal potentials in the realms of uncertainty. Simultaneously, the instruments were developed so that the author might experience the conditions of indeterminacy that are being drawn while making a drawing.

Normally, an architect is commissioned to design a building by a client who has the motivation to enact certain things at a particular place. The client's request is formed into a programme that sets out what it is that the architecture has to achieve. Typically, what is discussed in the programme is in the form of explicit knowledge – ideas that we know we know about and can articulate clearly to someone else. The conventional architectural programme attaches itself to the architecture rather than the occupant, and yet we all occupy it in different ways – even each person might deviate in this from day to day. What is at stake is not just the capacity of architecture to adapt when circumstances change, but also its capacity to be relevant to multiple simultaneous sorts of occupation.

The programme is a necessary tool but, in trying to articulate the specifics of what might take place in the project, many of the sensibilities learned from our experience of inhabiting architecture are lost – in order to be reliable, it becomes reductive and leaves out much of the richness of life that emanates from the unexpected or from things that we are less certain about or are unable to articulate. Our understanding of this realm is not readily accessible as explicit knowledge. Instead, we understand such conditions through our tacit knowledge, discussed by Michael Polanyi as the fact "that we can know more than we can tell".<sup>3</sup>

The devices I have built to pursue the pleasure of the indeterminate in architecture might at first seem paradoxical, as they appear as didactic instruments – instruments of certainty. In practical terms, they are instrumental – they are set up to test a range of specific ideas – but their appearance is also an attempt to seduce the observer. One way in which this might work is that the precision, care and apparent purposefulness of the instruments might persuade the observer that the splatter drawings that they produce might be of some substance. There is, however, another dimension to their apparent didactic nature. While I was studying the potential of the picture plane, I constructed a set of cameras to understand the projective techniques of James Perry Wilson's<sup>4</sup> diorama background paintings, the dioramas providing an intriguing world where material and pictorial space met each other seamlessly. While I learned what I needed to understand about the picture plane from this work, the intensity of my involvement with the dioramas opened up a greater understanding of the potential of didactic instruments that at first seems to run counter to their purpose.

For my purposes, the didactic instrument has the potential of a translator between explicit and tacit knowledge. The dioramas I was studying were built with exquisite care to reveal the relationships between contextual ideas such



as topography, climate, available nourishment (plant or animal) and environmental colouring and material with the physiology, appearance and social behaviour of the exhibited animals. They were constructed so that the museum visitors could tacitly construct for themselves the understanding that had been embodied in the dioramas from explicit knowledge by the museum's scientists and curators. While the didactic ideas are embodied with great care and precision so as to amply provide for the interpretation that the curators prescribed, as with any creative medium the reception is not entirely reliable; beyond our understanding of what we are supposed to discover, these sites of wonder provoke our imagination beyond the didactic intention. They have the capacity to relate tacit and explicit knowledge as well as to seduce the imagination to delve into unexpected realms.

My early optical instruments, which made drawings by projecting the image from a physical model onto a folding picture plane to produce a drawing on photographic paper, attempted the first seduction. The instruments hold a model in a box, which is illuminated so that its image is projected via a lens onto a folding picture plane. The plane also holds a second model, identical to the first (except in size, to compensate for the optical cone of projection), so that it casts a shadow on the picture plane that appears to come from the original model. When examining the consequent drawings, the paradoxical shadow – which sits on the image plane rather than within the

perspectival depth of the image – requires the observer to construct their own logic for the image if it is to make any sense. The instruments worked well, implicating the observer in the content both in terms of their capacity to choose how to receive the image by adjusting the fold of the picture plane and also through their imagination when making sense of the image. The instruments work as things provided for this to happen, both mechanically and as a seduction to engender belief that the consequent images were worth investigating.

The limitations of the early instruments lay in their causality – as with the prescription of the architectural programme, they supported what they set out to do but were limited beyond this performance. Their capacity was understood in advance of construction as explicit knowledge that was confirmed and elaborated on when making their drawings. The veracity of light is so unerring that it provides little scope for the unexpected. The question was how to hold onto the potential of the folding picture plane (that the early instruments had teased out) in relation to projection without the strictures of light, and how to enrol the instruments to help construct tacit knowledge.

When an architect makes a drawing of a building to satisfy a programme we can look at two sets of causality. One is that when built, the architecture will support the activity that is predicted for it. The second is that what is drawn is set out to describe such a thing. In making

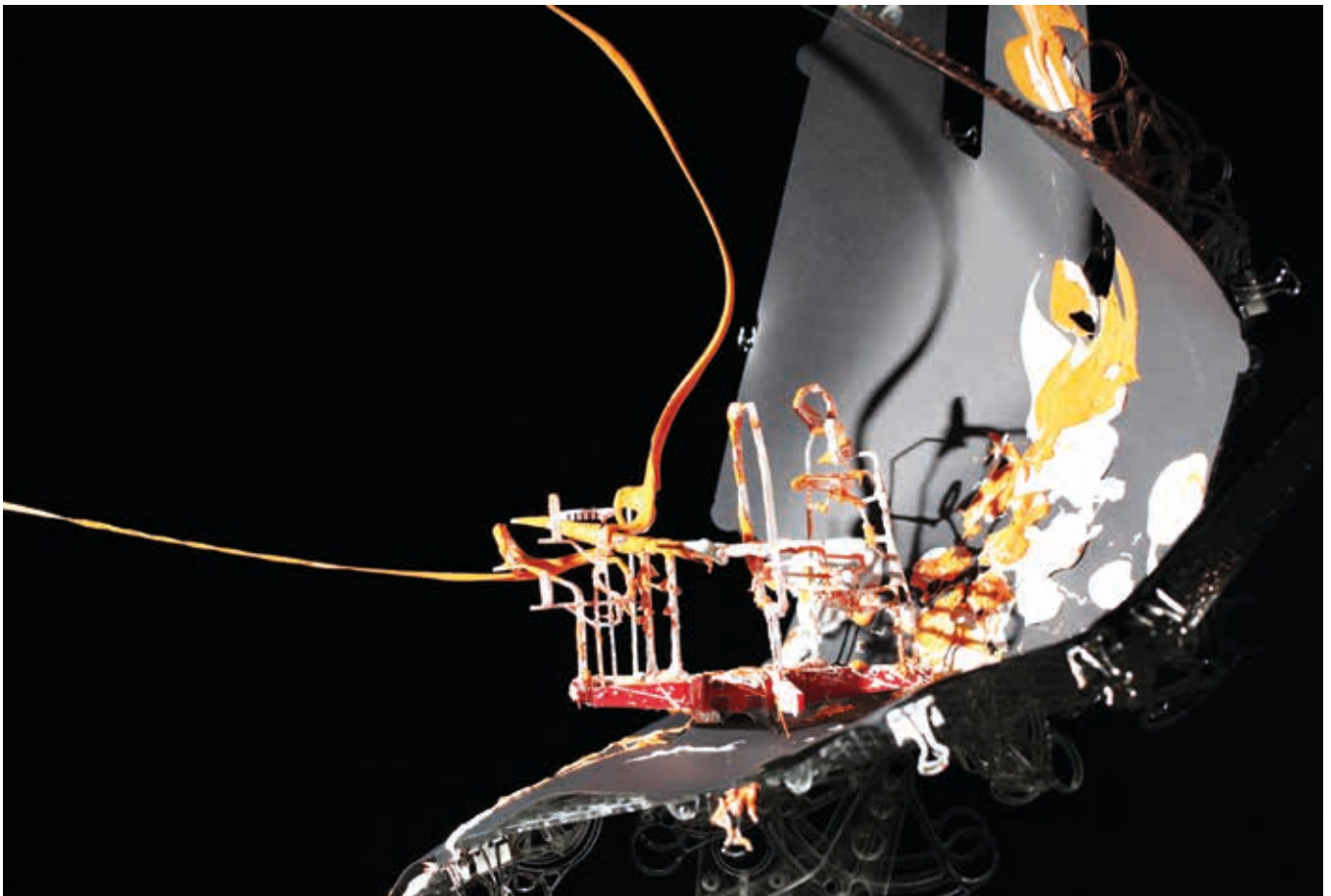


Fig. 1: Nat Chard, *Instrument Five in action*, high-speed flash photograph. The latex paint (accurate for direction but different in character for each throw) engages the drawing pieces.

a drawing, the thing that is drawn is likely to differ from the thought in the architect's head in advance of making the drawing. This happens through the normal occurrence where the creative mechanism – the process and materials of drawing – teases out ideas (from wherever creative ideas come from) that might go further than the original thought. By working through a medium, ideas are infected, corrupted and nurtured and this is typical of most creative processes. The point of clarifying this part of the creative process is to make the distinction of a causal relationship between idea and technique. While drawing architecture to meet a programme, the process of drawing is likely to contribute to and alter the architect's noting of what they will draw. The early optical instruments had a similar role and are successful in playing it out. Their failure is that they were in service to a premeditated idea, rather than teasing out ideas that had not yet occurred.

The question of how we might design for those things that we do not know will happen raises a paradox that makes sense of the programme. In order to make a drawing instrument that might enter this territory, I opted to make the act of drawing relate to content that was only partly premeditated. The instruments make the shift from a medium that supports an idea to one that might intervene more actively. To test this possibility, the new instruments projected paint rather than light. An arm-like catapult projects the paint towards an architectural model. The flying paint stands for the occupation of the architecture, represented by the model, which I called the *drawing piece*, as it is that that transforms the flying paint into whatever figures the resulting splatter might take. The splatter from the collision between the paint and the drawing piece is collected by a folding picture plane that learns from the earlier optical instruments.

To set up the instruments, the catapult is aimed at a part of the drawing piece. I had not made a paint catapult before and the accuracy of the paint throw exceeded my expectations. Each throw of the paint, however, has a unique character, something I discovered from taking high-speed flash photographs. The aim might relate to a general idea of programme but the nature and character of the flight of paint in the given direction opens up a wide range of ways in which that programme might (or might not) be acted out. The throw of paint is not a random image-maker. The degree of chance is therefore subtle and allows the discussion of indeterminacy to be held within a range of ideas rather than as completely open-ended.

The instruments throw latex paint. As mentioned before, this is different from other sorts of paint in that it is a non-Newtonian fluid like blood. Forensic scientists have a range of digital and analogue tools to recall narratives from blood splatter at a crime scene. There is software available to reverse-engineer the origin of splatter registered by hand-held 3D scanners. Equations are used to establish a bloodstain pattern index<sup>5</sup> that helps establish an area (if not point) of origin. This body of knowledge of how to understand what might have taken place to cause splatter made latex paint a helpful accomplice.

When the first flying paint tests were made with Instrument Four, it was immediately apparent that the drawings were telling only part of the story. The throw of paint happened so quickly that the occurrence was hard to fathom, even if it could be deciphered. To discover what had happened during the throw, high-speed flash photography was employed. The images proved revealing as well as compelling so that, in combination with the drawings made by the instruments, two partial stories were told – implicating the observer to fill in the space between them. Arthur Worthington's<sup>6</sup> attempts to register the nature of splashes,<sup>7</sup> at first through flashes and drawing the after-image on his retina and subsequently through flash and photography when photographic emulsions became fast enough, constitute one of the earliest academic uses of high-speed flash photography. The process was later popularised by Harold Edgerton.<sup>8</sup> Both used milk in their experiments, as the pigmentation of the liquid made it more apparent than water. The first tests with Instrument Four were with white paint for similar reasons. The photographs revealed all sorts of twisting and bending actions in the air, so subsequently two colours of paint were placed (unmixed) in the catapult's cup for each throw – usually white and an orange similar to international orange, the colour that is used next to white for the chequerboard patterns on structures that occupy the infield of civil airfields. The combination of colours describes the twisting of paint more precisely in the high-speed flash photographs.

The paint catapults are adjustable for power, line and length. The first versions were made using disposable plastic spoons to hold the paint, but the first test with Instrument Four suggested other forms should be tested. In subsequent instruments, measuring spoons with a partially spherical bowl were used in Instruments Five and Seven and ones with a cylindrical bowl in Instrument Eight. The sharper lips on these paint-holders provided a range of character to the throws that suggests that the profile of these components provides an opportunity to further characterise different throws of paint. This is being tested in the current set of instruments. For the first few instruments, the general nature of a round cup made sense – that the character of the paint (occupation) should not be prescribed. Now that the process of drawing with flying paint is better understood, it is time to explore the range of modulation in that process.

The drawing pieces mix figurative elements with parts that understand that they are being occupied by flying paint. Part of the adjustments from the figurative relate to straightforward practicalities that acknowledge the nature of the paint throw. The character of the flying paint tends to consist of stretched-out lines of fluid. Just as the stage sets for marionettes have to accommodate their strings, which make some architectural elements, such as walls above a door, impractical, the architecture is altered in the model to accept the paint.

There are several temporalities discussed in the drawings. Each drawing witnesses a number of throws, so there is

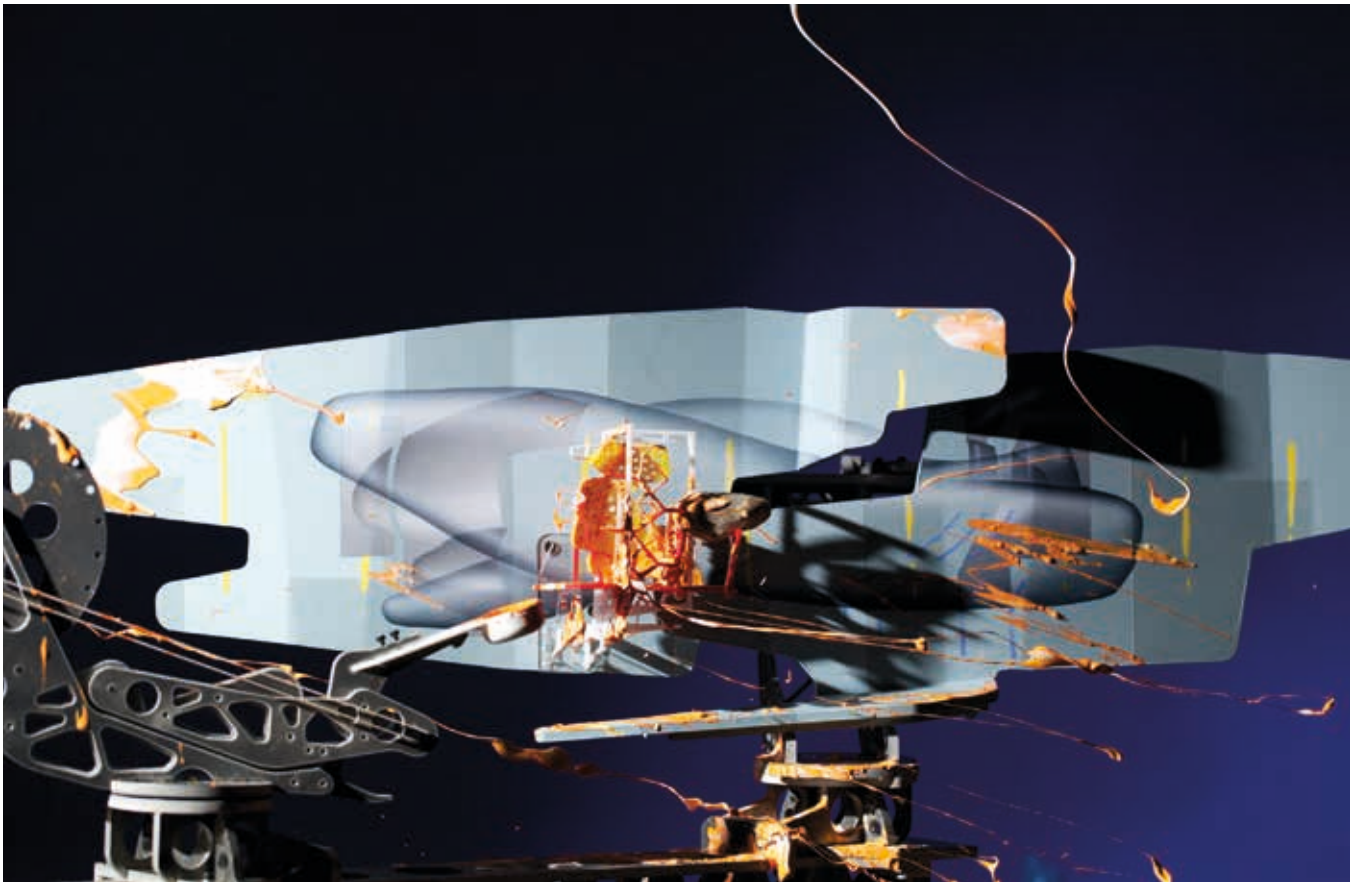


Fig. 2: Nat Chard, *Instrument Eight* in action.



Fig. 3: Nat Chard, *Two versions of Instrument Eight* (a collaboration with a research colleague). As with *Instrument Five*, they throw paint at each other. A difference is that the picture plane lies beside the trajectory of the flying paint so as to catch just the splatter – not the main throw of paint.



an accumulation of times through sequence. In the later instruments (Seven and Eight), the drawing pieces are made so that the accumulations of paint will have an effect on their subsequent performance – a memory of previous throws – especially where transparency is concerned. Within each throw there is some paint that collides with the drawing piece and causes splatter while the rest flies past. There are drawing pieces that, as well as holding the capacity to characterise the deflection of paint, are also made to hold onto the paint in different ways so that it might be active in making a register on the drawing at a later time than the particular throw when they were hit – perhaps even after a subsequent throw. One type of such a component is the hoop, which can gain a meniscus of paint when hit (a little like the film of detergent on a bubble-making hoop). Another is the comb-like element, which behaves in a similar way to those extruded pasta shapes that provide a large and accommodating surface area on which the sauce might attach itself. The paint meniscus will eventually burst and make its own character of splatter, while the comb will hold paint for a while until its viscosity lets it drip onto the part of the picture plane that sits below the drawing pieces.

The most active part of making a drawing with the instruments lies in the relationship between the catapult (with its paint cup) and the drawing pieces. These are the things that can be modulated to offer up new possibilities in the drawings. As with the optical instruments, the picture plane also plays a role. The picture plane is an imaginary surface that sits between the person making the image and their subject. The points on this plane that register its interruption of the line between the artist's eye and a particular part of what they observe is transferred to the canvas on which they paint or draw. Since Leonardo, artists have devised ways to curve the picture plane, usually so that the outermost edges are brought closer in plan towards the eye of the artist, so that the peripheral perspectival distortions are less pronounced, with the consequence that the picture appears more natural, in effect replicating for a picture what our eyes and perception construct when picturing the three-dimensional world. In the case of the optical instruments, the degree of fold on the picture plane provides a critical reception of the image in such a way that the receiver is implicated in the content of the image they collect.

With the projection of paint, the nature of sciagraphy changes from that in the optical instruments, where the picture plane distorts a projected figure to form its shadow. When flying paint hits the drawing pieces, the shadow is shaped by the collision between the paint and the drawing pieces to produce a splatter that is usually unrecognisable from the figure of the drawing pieces. In the test instruments (Instrument Four) and the first series of operational instruments (Instrument Five), the picture plane sat behind and under the drawing pieces, just as an optical screen would sit in the line of projection. As a consequence, the delicate splatter from the collisions could be smothered by the general throw of paint. In Instruments Seven and Eight, as well as those currently

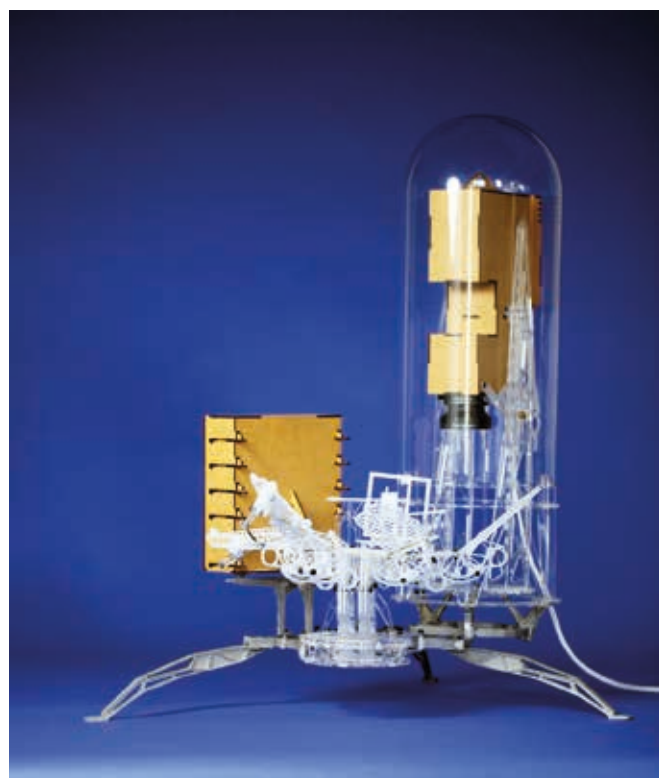


Fig. 4: Nat Chard, *Instrument Three for optical projection*. A model in a box is illuminated so that its projection lands on a folding picture plane that also has a replica of the model sitting on it, constructing a paradoxical shadow.

under construction, the picture plane sits alongside the trajectory of paint, with a small extension sitting below the drawing pieces to catch any drips or bursting meniscus. This position collects any splatter from one side of the collision, yet it lets the paint that does not hit anything (and therefore does not have an opinion worth registering) sail straight past. These folds are more subtle but have a much greater influence on the reception of the splatter, as the projection is more anamorphic than the earlier frontal planes. From my research into natural history dioramas, the combination of anamorphism and a folded picture plane had promised a way of receiving projections that could help spatialise the image. With the later instruments, this had come together – but in a less figurative manner. The sensitivity of the latest picture planes to a small adjustment in angle or fold has made the picture plane as active as the catapult and drawing pieces when making a drawing.

The act of making a drawing is somewhat complex, as there are several forms of representation in play. Apart from the image constructed by the splatter, the picture planes in Instrument Eight<sup>9</sup> already have a pre-made drawing on them. These drawings understand that they will be understood from two different directions – from the origin of the projection and from the side view of the camera that captures the paint in flight. The accretion of splatter on these drawings alters their content but also their sense of trajectory. There are also adjacent small models, protected from flying paint by glass domes, which remind the person who is drawing of the content that the drawings are trying to discuss. The high-speed

flash photographs record the paint in flight as it hits the drawing pieces – the moment of occupation documented by the splatter. But there is another form of representation that is drawn out through the process but does not register as an image. While working with the instrument, it can construct for the person who is drawing a condition analogous to that which it tries to draw.

The act of drawing might go like this: the author sets the fold of the picture plane in relation to the drawing pieces and aims the catapult. This aim holds a desire for a sort of occupation; similar to the way an architect might imagine their architecture being occupied. The paint is loaded in the cup, and in the dark, holding the trigger for the catapult in one hand and that for the camera and flash in the other, the author fires the paint and then almost immediately the camera. At this point, the author might have a desire for the sort of occupation represented by the flying paint and be inquisitive about what might be drawn in splatter as a result. Yet there is a second set of

desires, for the author knows that beyond what is in their control the intervention of the flung paint's own will might open up the discussion beyond what has been predicted, so that there is one hope for what will happen but a second hope that the first hope will be eclipsed by greater things – the intervention of the instrument. The manual triggering of the camera and the speed of the paint means that only about one in three throws of paint are captured, so there are two levels of expectation in the photographs – was the paint registered and, if so, what does it show? The accumulation of anxieties and desires played out in this process involves a range of uncertainties that can help construct the very conditions of the sublime and the indeterminate that the drawings are trying to discuss – there is therefore a resonance between the process and enacting the process. The personal or tacit knowledge accumulated through doing this helps the author to understand the more explicit nature of the splatter with greater depth in such a way that *drawing* in this case is simultaneously a verb and a noun.

<sup>1</sup> Leonardo da Vinci (1452–1519), identifies the marginal distortions in linear perspective in a line of equal diameter circular columns when using a flat picture plane.

<sup>2</sup> Martin Matisoff and Larry Barksdale, "Mathematical and Statistical Analysis of Blood Stain Splatter" in *The Forensic Examiner*, Vol. 21, No.11, Spring 2012, 26–33.

<sup>3</sup> Michael Polanyi, *The Tacit Dimension*, Chicago and London, University of Chicago Press, 2009 edition (first published 1966), 4–0.

<sup>4</sup> James Perry Wilson (1889–1976), trained as an architect at Columbia University and subsequently applied the rigour of architectural perspective projection to natural history dioramas, starting at the American Museum of Natural History in New York. The author built a set of cameras to understand his projection method that related to his Cold Bog diorama at the Yale Peabody Museum.

<sup>5</sup> Matisoff, "Mathematical and Statistical Analysis", 33.

<sup>6</sup> Arthur Mason Worthington, (1852–1916), physicist who pioneered high-speed photography.

<sup>7</sup> Arthur Mason Worthington, "The Splash of A Drop" a reprint of a discourse delivered at the Royal Institution of Great Britain, 18 May 1894 (1895), London, Society for Promoting Christian Knowledge, 1895, (reprint by Kessinger Publishing's Rare Reprints, LaVergne, TN, 2010).

<sup>8</sup> Harold Eugene Edgerton (1903–90), professor of electrical engineering at MIT who developed high-speed electronic flash photography.

<sup>9</sup> Instrument Eight was built in collaboration with Perry Kulper.

# The Fall and the Rise: Lebbeus Woods' Metaphorical and Narrative Drawings

Massimo Mucci

Nowadays, digital architectural representation has accustomed designers to the rapid consumption of images, even when they are very complex, leaving us little time in which to analyse all their meanings. Blueprints and drawings that hang on the walls like art are not supposed to be seen as theoretical and paper architecture, although this can happen. On the contrary, we expect to receive a deeper theoretical message from what we perceive to be a sublime scene.

In the case of Lebbeus Woods, his drawings have great evocative power and are aesthetically appealing, but their real message can easily be misunderstood if it is not analysed in terms of its usefulness to architectural theory. Lebbeus Woods' work is not currently collected in a single monograph; instead, it is spread over numerous articles and critical essays. A strong stimulus of the dissemination of his drawings and theoretical texts has come from books written by Woods himself and, although they are still rich sources of information and indispensable for outlining any critical path, they influence any interpretation we make because of Woods' use of a narrative storyboard. However, what we need for Woods' projects is a new interpretation of his ideas of architecture and city reconstruction. This paper therefore proposes a consideration of the dialectic reasoning that could be said to exist between the 'rise' and the 'fall' contained in Woods' optimistic projects, from 1988–89 with *Underground Berlin* and *Aerial Paris*, when he began inserting visionary architecture into the real background of cities.

This essay takes both Woods' designs and theoretical texts into account in order to find a connection in their meaning. What are the figures of the rise and the fall in the drawings? What writings justify them? Are there any recurring architectonic metaphors? This study searches for the relationships between image and text in order to illuminate any hidden layers of meaning.

## THE RISE OF CITIES IN CRISIS

Lebbeus Woods had drawn up several utopian city plans by the end of the 1980s. His criticism of existing society was expressed through a vision of alternative worlds which had the typical characteristics of a utopia: the absence of a well-defined real place, the setting of an indefinite future time and the great faith in technological development being at the service of humanity. The society imagined by Woods is balanced both in its relationship with community and in its relationship to the Earth, from whose energy sources it benefits.

In his designs for *Underground Berlin* (1988), a previously conceived utopian community is lowered into a real city, highlighting a conflict between utopian thought and its

implementation. In the writings and drawings of Woods, conflict seems to find a solution in a form of active cultural uprising, started at first secretly and illegally and, indeed, underground. The designer proposes the reuse of abandoned subway tunnels to establish a heterarchical community that pays no attention to political and territorial divisions of the surface city.

Woods' criticism of the Berlin Wall and the German state's coercive control of citizens' life becomes clear: "In this project the subversion of an existing authoritarian system of social control is accomplished by architectural means [...] The construction of a new city within and in opposition to an existing one amounts to an act of renunciation and even of violence, more lasting in its effects than those achieved by the gun".<sup>1</sup> Woods believes in architecture's ability to change a city's culture and does not exclude the possibility that this change will be as violent as a weapon. The uprising takes place from below; the obscure depths of the contemporary city and the occupation of the Berlin subway are unauthorised; instead, it is a spontaneous refusal to participate in contemporary society.

In some places, invisible underground architecture emerges and appears with all its explosive strength, raising the Earth's crust, pushing out skyward and finally throwing out its subversive message: "The hierarchical surface city is met by the heterarchical subterranean city in structures built to break the physical and ideological barrier between them. The projection towers are architectural weapons *par excellence*. They have every intention of disrupting, of tearing the fabric of the surface city and its way of life".<sup>2</sup> The drawing is made so that the focus is on the central building, which has a dynamic form consisting of curved and flat surfaces mounted as fragments on an unbalanced skeleton, as if it were folded by dynamic forces coming from underground. The tower is brighter than the background and is in sharp geometrical contrast to the other grid-based existing facades of buildings. Hence, Woods depicts the idea with the dialectical juxtaposition of opposite-meaning couples: dynamic/static, bright/dark, irregular/regular.

The second example is the set of drawings for *Aerial Paris* (1989), which appear even more radical and visionary precisely because they are inserted in a real context and accompanied by texts that increasingly have the tones of an exhortation to uprising. Antigravity, as opposed to the detaining force of gravity, becomes a symbol of liberation. "Antigravity refers to struggle, tension, anxiety and restless assertion of the kinetic and animate against stasis. Gravity is an insidious enemy of the animate".<sup>3</sup> The dialectic between static and dynamic, which is also reflected in the metaphorical opposition of death and life, is developed in Woods' political discourse as a dialectic between

authoritarian power and individual freedom; and it is the prerequisite for taking a radical position against societal control – the basis for his oppositional, symbolically determined and continually changeable open society. "I therefore declare myself against gravity, because I am for animation and movement [...] I reject gravity's arrogance and claims, and assert a counterclaim – I am a free spirit, autonomous and self-determining, a being and an architect of antigravity".<sup>4</sup>

In the drawings, these concerns are depicted via air-hovering 'aerial houses', which do not follow repetitive rules but rather express individual freedom. This is a subversion of the concept of architectural tradition, because in Woods' vision the inhabitants are never inspired by the past, as time is incapable of fixing any form in the air. The constructions are continuously adapted to the changeable forces of the air and are unpredictable because they do not respect any plan. However, perhaps the most incisive symbols used by Woods to represent this extreme autonomy are the huge sails unfurled in the sky, which inflate and move as if they were flags of freedom.

Yet to some extent the *Underground Berlin* and *Aerial Paris* projects remain detached from reality because of their overly extreme visionary criticism, which at the same time, of course, assures their sublimity. But what happens when change really comes, as with the fall of the Berlin Wall? What happens to this idea of dynamic architecture? How is this sweeping change represented?

As Peter Cook has written, the kinetic condition in architecture had already established itself in the 1960s and developed in the following decades via the concept of metamorphosis, perhaps best represented by the explosive collision between architecture and high technology/the digital world.<sup>5</sup> This condition emerges clearly in Woods' work when he returns to Berlin in 1991 with the speculative project *Berlin Free-Zone* (1991), because he sees in the passing of crisis a great opportunity for cultural transformation.

This set of drawings is closely linked to the *Berlin Underground* and *Aerial Paris* projects through a narrative that was perhaps not foreseen at the beginning. "The aerial habitations above Paris find their way back – in the *Berlin Free-Zone* project – to the city of their subterranean origins. Yet they do not return underground. Instead they enter – in a conceptual sense – the existing structures at the centre of the re-united city of Berlin, at a moment of profound political, cultural and existential crisis and transformation".<sup>6</sup> But this fiction is a pretext to introduce the new concept of Freespace: "Having no pre-determined use or presupposed meaning, being therefore 'useless' and 'meaningless' space [...] Taken as a group, the heterarchy of Freespaces comprise a Free-Zone of shifting interconnections and interactions between inhabitants using nodes of electronic instrumentation located in each Freespace. Thus a type of urban order is created without hierarchy or fixed form, changing continuously..."<sup>7</sup>

There is no room here to expound this issue; instead, we will focus our attention on the well-known section of *Berlin Free-Zone* where we can see the Freespace as a metaphorical representation of the impact of digital technology on architecture. The drawing represents a hybridisation between the existing city, still exemplified by the prevalence of a regular grid, and the new Freespace, consisting of a fluid volume which, because of impact, is folded and crumpled at various points. Inside this shell, there are technological objects and tentacular cables of interconnection passing through the space and invading the rooms. This drawing is clearly a metaphorical representation of two different ways of thinking, or two systems that have to live together. In fact, the sharp section seems like an anatomical and scientific drawing that shows how the organs work, and is a disturbing and surreal scene.<sup>8</sup> The new technological age will lead to anxiety and uncertainty, despite the fact that it could be positive if the hybridisation leads towards a heterarchical society – as Woods says: "it is the ideal type of organization for the increasingly democratic (not to say anarchic) information and electronic-age".<sup>9</sup>

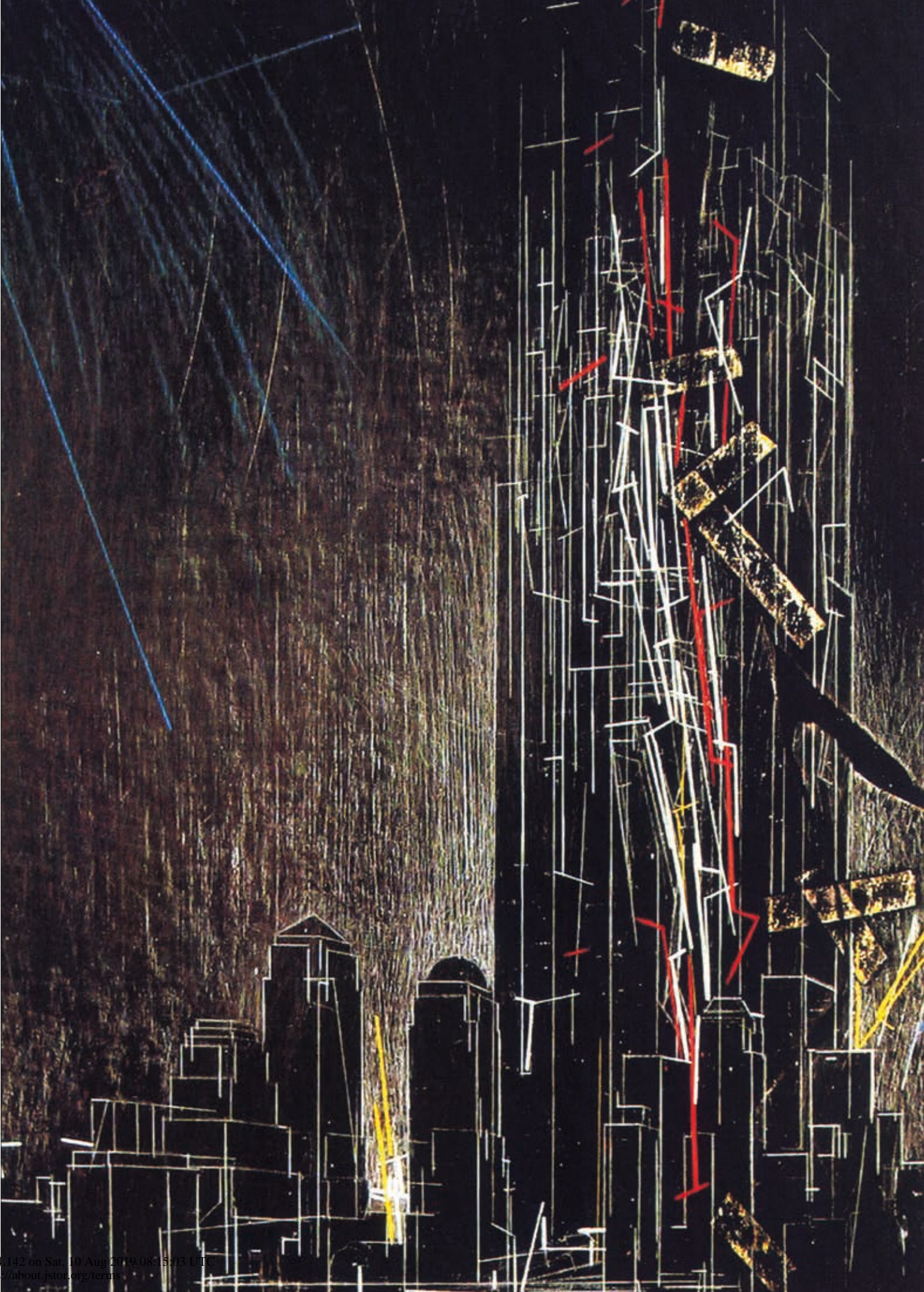
What we want to highlight here is the architectonic theme of the intersection between non-homogeneous entities symbolically represented with conflicting opposite geometrical forms, according to the dialectic of regular/irregular, linear/curved, static/dynamic. The intrusive object, the Freespace, is an empty space which invades the rooms of the host object, establishing new connections between the internal spaces. This theme had already been explored by Gordon Matta-Clark in his performances, such as *Conical Intersect* (Paris, 1975), where the empty volume inserted inside the existing traditional building establishes a new radical order and hierarchy through a different interconnection of interiors. In a similar manner, Steven Holl composes this dialectic in *Simmons Hall* (MIT, Cambridge, 1999–2002) and Thom Mayne, too, in *The Cooper Union* (New York, 2006–09).

The rise after the dissolution of the ordered world in *Berlin Free-Zone* is the end of a period in which a metaphorical narrative binds together a group of projects that pursue a representation of a positive social evolution, albeit driven by subversive forces. In subsequent years, the figures of rising are closely linked with the idea of the fall in Woods' experimental 'radical reconstruction' theory; the projects defined by this theory have in common the image of physical collapse as a metaphor for the collapse of the established order, enabling opportunities for a new social order.

In fact, the book and drawing series *War and Architecture* (1993), devoted to the ongoing war in Sarajevo, announces the end of Woods' period of visionary and optimistic narratives about the spontaneous uprising from the underground. Instead, there emerges the awareness

Fig. 1 (opposite): Lebbeus Woods, Architect, American (1940–2012). *Perspective View of the Project from the Hudson, Looking East (from World Center)*, 2002, digital painting, 19 × 26 in. © Estate of Lebbeus Woods.







of a traumatic and violent deconstruction with unpredictable outcomes. These drawings show a violent dynamism in which deconstruction and construction are both seen as inherently configurative forces, able to create new forms including fragments caused by the conceptual shattering explosion of the past world, in a similar way to that stated by Zaha Hadid in her early projects. The fall and rise are intertwined; indeed, it is unclear whether the new monstrous biomorphic figures appearing in the ruins are destroying or rebuilding the city, and if the fragments are coalescing or bursting (Fig. 2). We can see these drawings as the beginning of a new story, one about reconstruction as a physical and existential transformation, which will be Woods' main theme in the following years. Moreover, in this case the coloured pencil technique has the important role of homogenising opposite entities, so that existing ruins, new forms and energetic trajectories appear as one.

Woods criticises the idea of reconstruction as mere restoration of the pre-war city, because, he suggests, this would be the symbolic reaffirmation of the conditions of the society which caused the war. On the other hand, he disapproves of the modernist *tabula rasa* and the idea of 'urban renewal', as this erases history – including the memory of the war itself – and therefore also loses the variety and complexity of the old city.<sup>10</sup> Hence, he proposes the acceptance of ruins as an existential remnant of war, and to use them as a source of inspiration for spontaneous new forms, requiring active participation by the people. "The new spaces of habitation constructed on the existential remnants of war do not celebrate the destruction of an established order, nor do they symbolize or commemorate it [...] There is an ethical and moral commitment in such an existence, and therefore a basis for community," he says.<sup>11</sup> In this case, the reconstruction of ruins is the real act of uprising by the population, which leads to a psychological and cultural healing through a biological analogy with the physical healing process.

The first step is the 'injection' of spontaneous inhabitable structures in the gaps formed within ruins, which require inventiveness and creativity to make inhabitable, as "they are not predesigned, predetermined, predictable, and predictive" spaces<sup>12</sup> – exactly like Freespaces. After that, there begins the building of temporary protective structures called 'scab construction', and finally the permanent 'scar construction'; that is, architectural parts bound together and fused with existing ruins, though remaining recognisable. Thus, even the most visionary images representing 'new tissue' in formation – as if we were looking at the building processes of matter – are metaphorical narratives of a reforming psychic and social tissue.

Perhaps the best representation of the new relationship between rise and fall is the *High House*, a metaphorical house anchored to the ground by metal rods under tension and held in firm position by cables. It represents dynamic energy reassembled and restrained, expressing the continuous tension needed to rebuild society while

avoiding the mistakes of the past. Woods states, "these houses respond to people's powerful need to achieve freedom of movement in space through a fuller plasticity of experience, and to exist in the full dimensionality of space – to fly and yet, paradoxically, to be rooted, to belong to a particular place and time".<sup>13</sup> In other words, the *High House* conveys the idea of balance as a constructive tension between contrasting forces, for both architecture and society. This concern also appears buildable thanks to the pencil technique. In fact, we can see perspective with kinematic projection and technical cross-sections, explaining the structure and its possible mobile capabilities, although in fact it does not actually have its own engine. We think of it as an efficient metaphor for the concept of social reconstruction understood as the coexistence of opposite but interconnected parts, which have to move together to find a balance once again.

In subsequent years, this idea has been developed elsewhere to understand other sociopolitical crises or situations of neglect and decay, such as in Havana, or the post-earthquake conditions in *Inhabiting the Quake* in San Francisco, or in the destruction of the 2001 terrorist act in New York. In the case of Havana, the revolutionary uprising message is explicit in Woods' writings: "I do not want to see the Cuban revolution end. I want to see it succeed, even more so than it has been able to under the pressure of economic siege from without and oppressive, totalitarian governance from within. Because of these two sources of pressure, which are closely linked, the revolution has not yet found its architecture".<sup>14</sup> As in Sarajevo, Woods believes the restoration and reconstruction of Havana's historical old city should be based on popular participation. For instance, the project involves the construction of a new monolithic urban wall containing all necessary services, on which people can spontaneously add temporary slab-formed structures which over time become permanent and spread along unexpected paths.

The rise here is a form of resistance against the fall of revolution, represented by the spontaneous and unpredictable forms filling the empty space around the existing infrastructure, both in the old city and along the new wall. We can see this evolving process in the sections in perspective, which show scenes of everyday life in improbable rooms with suspended and interconnected floors linked in turn to sloping walls. Similarly to the *High House*, the image represents a potential kinetic energy that, if released, would involve all other elements, perhaps with the exception of the great wall. Thus the drawings for Havana are the architectural representation of a dynamic balance as interconnection between different components, in which individuals may continue to add other parts in a similar manner, forever increasing the complexity of the system.

The *Inhabiting the Quake* project is set in San Francisco, although it is inspired by the disastrous destruction caused by the earthquake in Kobe (Japan) in March 1995, where the collapsed buildings suggested the failure of

designing according to the orthogonal grid. The grid structure is still seen as the symbol of a rational society that excludes the unexpected and the irrational, not only in the geological field, but even in the political, social and artistic ones. "It would be more rational to put aside doctrinaire ways of thinking and their inherently vulnerable systems, and to create new systems of shaping space, new types of behavior and patterns of thinking and living that incorporate earthquakes as an essential aspect of reality".<sup>15</sup> However, the interesting aspect of this analysis is that it has an original design outcome compared to previous cases and carefully considers the seismic characteristics of the site.

As for expressive language, can architecture represent these balanced tensions? Woods suggests a shift in structural thinking, no longer with grid-based frames too weak to withstand dynamic forces, but rather with a composition of variably sized plates, imagining that their juxtaposition has been completed by an earthquake. The composition created by the seismic wave spontaneously finds balance and greater stability. Therefore, as with Havana, there is in this process a random component aside from the external action of the designer – the earthquake and gravity – that transforms and completes the form and in this case the structural functioning as well. We could call it a kind of settling of the composition, which becomes architecturally expressive through the poetics of fragments.

In the case of *Slip House* and *Shard House*, the fragments are the collected and reassembled remains of previous civilisations, whereas the splinters of rock in *Fault House* are inspired by the geometry of the local geology. Everything is drawn with mixed technique and assembly sketches, plans, sections, dynamic representations and the usual perspective view made using coloured pencils, full of details to give the effect of a sublime atmosphere.

## THE FALL AND THE RISE

The themes which emerged from Woods' projects for Sarajevo, Havana and San Francisco are collected in his book *Radical Reconstruction*. In the following decade, he develops them, changes his formal register with new abstract linear compositions and, in particular, begins to eschew the architectural realistic image. This transition had already been anticipated in the study *Terrain: tectonical landscape* (1999), in which he developed the idea of a settled composition caused by external forces, a phenomenon found in the analysis of the terrain's morphogenesis and which becomes the model for understanding how different components, both natural and artificial, can reach a balance while maintaining a state of internal tension.

But the event that induces Woods to apply this idea to the broader political dialectic of fall and rise is the 9/11 attack on the Twin Towers in New York. "Because we need to defend against possible and imminent recurrences, we naturally look for the most immediate and direct cause of

the fall and of its disastrous consequences [...]. This is reasonable only if we do not consider them first aid applied to a traumatic wound [...]. The deeper wound, the trauma itself – embodied in the fall and its memory – is examined only in medical and academic quarters, far from public forums and discussion".<sup>16</sup> The message that we can read in his next projects is his warning that we must become aware of the political and social interconnection of globalisation in order to deal with the 9/11 trauma. Therefore he proposes a cathartic step-by-step project of two consecutive installations and a plan for the Twin Towers' reconstruction, linked again through a narrative that suggests a redemptive, optimistic cultural and social evolution.

The first installation is *The Storm* (2002), set up at The Cooper Union in New York, comprising a horizontal bundle of steel cables which hold metallic rods at their ends, inclined in various ways and sometimes joined by horizontal bars. The metaphor of the storm is generated by the effect of a flow of vectors with variable intensity depending on their density. Moreover, the work is also a real physical model which enables us to visualise the operation of a complex interconnected system. In fact, when a rod is moved, there are unpredictable effects on all the others, because they are not connected according to a regular grid-based pattern. Furthermore, by adding other vectors, the tension throughout increases. The unexpected breakage of a weak element does not cause a general collapse, because the load is distributed across many elements, reducing the tension of the overall system. Therefore, as Woods declares, "the idea of transformation in a tension field is linked with the interdependence of the elements within it, and, more accurately, to their interconnectedness".<sup>17</sup>

The issue is taken up in *The Fall*, an installation performed at the Fondation Cartier in Paris (2002), representing the trajectories followed by the structural grid-based elements during the collapse with a maze of deformed metal bars. The theoretical rectilinear trajectory caused by gravity is disturbed by perturbation forces external to the system, which make unpredictable and non-linear paths. Thence ruins are the result of a spatial distortion, but are not seen as irregularities, rather as a different form of regularity "in ways unaccounted for by the former system".<sup>18</sup> In other words, Woods has taken the same concept of reconstruction adopted in Sarajevo and developed it, being inspired by complex systems, which also include the unexpected perturbative element. Ultimately, as in Sarajevo, he wants to strengthen the thesis of the critical reconstruction without rebuilding exactly the same as before and without *tabula rasa*.

However, in this period, the drawings are an abstract composition of linear vectors and shattered volumes moving in space; only in some of them is there a nod to a vague tower shape, an echo of the World Trade Centre (Fig. 1). Where is the architectural figure? Woods states that his interest is in "these ideas and techniques in the service of building design in ways that emphasize process



Fig. 2: Lebbeus Woods, Architect, American (1940–2012). *Meditation: "Architecture resisting change, even as it flows from it, struggling to crystalize and be eternal, even as it is broken and scattered..."* (from *War and Architecture*), 1993, graphite and coloured pencil on board. 20 × 12 in. © Estate of Lebbeus Woods.

instead of product, and conceptual integrity instead of finished form",<sup>19</sup> but why does he destroy even the image of architecture? As Anthony Vidler wrote a few years later, when Woods proposed another similar installation and performance in Wien, this way of stimulating change through a dynamic and temporary event was one of the artistic methods used by the Situationists, based on the idea of psychogeographic energy, where people are linked emotionally and create a community network in a psychical spatial map of the city.<sup>20</sup> This psychical relation energy interacts with physical spaces and events, and Woods seeks to represent it and to act on it with his drawings and installations.<sup>21</sup> However, nobody had built a work "that matched their imaginary worlds of intersecting psychic freedoms and physical ambiances that might redeem the cities of capital".<sup>22</sup>

The third phase of the cathartic process to get rid of trauma is the shared construction of a new large 'perpetually under construction'<sup>23</sup> tower in place of the World Trade Centre, which, as a symbol of regeneration, is constantly changing. This time, Woods returns to his visionary storytelling to launch a social renewal message about the rise after the fall, to build "a community that brings together diverse social classes – a new democratic realm rising above the competitive tumult of the city below, a place where contentions can be informed by new perspectives and possibilities".<sup>24</sup> Within the tower, he draws four ascending exhibition paths on the subject of 9/11, with different visiting times and which differ in their difficulty. The first is for pilgrims and takes one month;

the second is for those who are looking for answers and takes one week; the third is for holidaymakers and takes two or three days; finally, the half-day path is for tourists. These temporary visitors will find themselves at the top with permanent residents, mostly artists and scholars gathered in a constantly evolving community.

In conclusion, we can see in the first period analysed – Berlin and Paris – a clear juxtaposition between rise and fall, where uprising predominates as a positive social evolution through a strong individual autonomy. The projects are linked by a metaphorical narrative composed of dialectic figures of opposing concepts: dynamic/static, regular/irregular, linear/curved. In the second period, on the other hand, from Sarajevo to New York, the fall assumes a catastrophic role and introduces unpredictable elements into the project. The dialectic fall/rise is presented with less juxtaposition: there is more interconnection and interdependence between the different parts. The narrative does not link the projects but remains within the single set of drawings, while the metaphorical figures represent the dialectic relationship between construction and deconstruction, and the concepts fall/rise are melded in the same world. We can see in the drawings, models and installations an increasing use of the image of physical dynamic balance as a metaphorical complex interconnection among several components. As in Sarajevo, the act of reconstruction after the fall can precipitate the transformation of a community that wants to change after the mistakes of the past, but in New York Woods does not want to fix the process through

architectural form, perhaps to avoid it becoming an empty icon. Is this the failure of architecture or an admission of its power? Woods does not seek the contemplation of a monument, but rather the participation of individuals in the reconstruction process. He does not even want to construct an architectural monument in the world of images, perhaps because he fears its externalisation and therefore that the image of architecture might become the monument itself and impede the change of history.

- <sup>1</sup> Lebbeus Woods, *Anarchitecture: Architecture is a Political Act* (New York: Academy Edition, London/St.Martin's Press, 1992), 50.
- <sup>2</sup> Woods, *Anarchitecture*, 51.
- <sup>3</sup> Woods, *Anarchitecture*, 64.
- <sup>4</sup> Woods, *Anarchitecture*, 64.
- <sup>5</sup> Peter Cook, *Drawing. The motive force of architecture* (London: Wiley, 2008), 48.
- <sup>6</sup> Lebbeus Woods, *Lebbeus Woods: Terra Nova 1988–91* (Tokyo: Architecture and Urbanism, August Extra Edition, 1991), 22.
- <sup>7</sup> Woods, *Lebbeus Woods*, 22.
- <sup>8</sup> Peter Cook, *Drawing*, 116.
- <sup>9</sup> Lebbeus Woods, *Lebbeus Woods*, 22.
- <sup>10</sup> Lebbeus Woods, *War and Architecture* (New York: Princeton Architectural Press, 1993), 10.
- <sup>11</sup> Woods, *War and Architecture*, 14.
- <sup>12</sup> Woods, *War and Architecture*, 21.
- <sup>13</sup> Lebbeus Woods, *Radical Reconstruction* (New York: Princeton Architectural Press, 1997), 18.
- <sup>14</sup> Woods, *Radical Reconstruction*, 19.
- <sup>15</sup> Woods, *Radical Reconstruction*, 21.
- <sup>16</sup> Lebbeus Woods, *The Storm and The Fall* (New York: Princeton Architectural Press, 2004), 107–8.
- <sup>17</sup> Woods, *The Storm and The Fall*, 51.
- <sup>18</sup> Woods, *The Storm and The Fall*, 113.
- <sup>19</sup> Woods, *The Storm and The Fall*, 22.
- <sup>20</sup> Anthony Vidler, "Drawing into space/In den raum zeichnen", in Peter Noever, eds. *Lebbeus Woods. System Wien* (Wien-MAK: Ostfildern-Ruit Hatje Cantz, 2005), 38.
- <sup>21</sup> Lebbeus Woods, "System Wien", in Peter Noever, eds. *Lebbeus Woods. System Wien* (Wien-MAK: Ostfildern-Ruit Hatje Cantz, 2005), 13.
- <sup>22</sup> Anthony Vidler, "Drawing into space", 40.
- <sup>23</sup> Lebbeus Woods, *The Storm and The Fall*, 176.
- <sup>24</sup> Woods, *The Storm and The Fall*, 177.



# Creatures Afield: Drawing the 'Dioramatic' Caricature

Joseph Altshuler  
Julia Sedlock

## ANIMATING THE ANTHROPOCENE

As scientists continue to debate the precise status of the Anthropocene, architects have eagerly absorbed the premise as a provocation for disciplinary speculation. The fact of human impact on climatic, geomorphic and ecological systems triggers the architectural impulse to reimagine the terms by which we define our present and future relationship to the environment, challenging binaries such as natural and artificial, inside and outside, subject and object. In a recent symposium organised by Columbia University GSAPP, Neyran Turan quotes geographer Mike Hulme's description of climate change "as an imaginative resource around which our collective and personal identities and projects can and should take shape".<sup>1</sup> Hulme's provocation echoes the philosopher and design theorist Tony Fry's proposal for the Sustainment – a cultural movement on the scale of the Renaissance or Enlightenment that "has very little to do with 'saving the world", but instead calls for a reboot of how we make and think that manifests via "critical inquiry, argument, literary and visual creative projection and value-transformed lifeworlds".<sup>2</sup>

Architecture is in a unique position to contribute to this process, as it "exists as both fiction and reality simultaneously [...]. The actualisation of the imaginary into the real is architecture's fundamental mode, its inescapable condition as a medium".<sup>3</sup> This process of actualisation happens through the act of representation, in the production of images and drawings that are both artefacts in their own right and instructions for the construction of something new. In her response to Hulme's prompt, Turan joins the Sustainment through an 'expanded geologic realism' that can engage the material reality of environmental contingencies with the representational potential of realism. Her examples are photographic images that deploy realism "as a form of strategic abstraction, [to produce] a subtle and unexpected separation from reality".<sup>4</sup> Visually complex with the detail and richness of the material world, these images possess an eerie and quiet gravitas. Avoiding the extreme of a post-apocalyptic dystopia, yet unapologetically devoid of life, they are ambivalent in their attitude towards inhabitation, human or otherwise, and are therefore mute in addressing the question of subjecthood in the context of our new environmental reality.

In contrast to Turan's 'expanded geologic realism', this paper explores the possibilities and potentials of what we call the 'dioramatic caricature'. As opposed to the complexity, simulation and gravitas of realism, we explore how the representational techniques associated with caricature – simplification, distortion, exaggeration and

humour – can be used to produce a convincing, yet not quite complete image of an alternative world, in which our own subjectivity is augmented and altered through the subjectivity of other creatures and objects. Whether through human engagement with live animals or through creature-like architectural form, the projects discussed below use the disciplinary means of simple line drawings to portray an expanded environment of animated interaction. As a deliberately reductive process of representation, the dioramatic caricature playfully, shamelessly and humorously asserts and amplifies the perspective of both author and subject through its selective inclusion of information and biased promotion of a particular worldview. The low resolution of these drawings leave room for interpretation, distortion or further articulation by its audience. As an alternative version of Sustainment practice, the dioramatic caricature mines the condition of the Anthropocene as an opportunity for architecture to create a new vision of an animated collective life that expands the boundaries of its environment to include various subjectivities of both the non-human and inanimate kind.

## THE EXPANDED DIORAMA: FROM CONTAINMENT TO COMPANIONSHIP

The inanimate taxidermy that fills the dioramas in the Akeley Hall of African Mammals at the American Museum of Natural History represents an outdated worldview that used captivity and conservation to maintain control of a growing empire. Donna Haraway's 'Teddy Bear Patriarchy' situates the invention of the diorama at the Museum as a 'meaning machine' within the context of early twentieth-century New York City, where the ruling patriarchal elite manipulated an aesthetic of organic realism to project an image of purity and order in a rapidly growing and diversifying city. According to Haraway, the danger of realism is that it "does not appear to be a point of view", but rather hides the artifice of its construction so as to present the illusion of naturalised truth.<sup>5</sup> From the point of view of Carl Akeley, the mastermind taxidermist behind the Museum's great hall, the diorama represented a direct translation of his safari experience in Africa via the composition of realistically preserved animals set in a lifelike reproduction of their native ecology, with simulated vegetation and rock outcrops in the foreground and a painted mural of the native landscape on the back wall to convey the larger context. The intention at the time of its production was to reproduce the truth of nature as it existed in the African wild and in its taming by white American men.

In today's high-resolution world, the artifice of the diorama is both obvious and unsettling, and therefore suggests

its potential as a technique to be harnessed towards more subversive ends. Leaving behind the aspiration of realism, we learn from these dioramas about the creation of worlds through the juxtaposition of 2D and 3D representation, through the illusion or flattening of space and the selective inclusion of detail. Yet for the diorama to operate as a truly productive and progressive machine of knowledge, we must heed Haraway's call for a definition of social relations that "include[s] the entire complex of interactions among people [...] objects, including books, buildings and rock [...] and animals".<sup>6</sup> From an architectural perspective, this expanded social environment invites human interaction and engagement with both live animals and creature-like architectural forms. These projects ascribe a subjecthood to architecture such that companion subjects of people, animals and animated built forms might integrate the ecological inputs and outputs that surround them. By letting creatures afield, these architectural examples transform our built environments into diorama-esque machines for knowledge-making and sustainment.

Studio Gang's recent proposal for the Gilder Centre extension to the American Museum of Natural History reconfigures the logic of the diorama within the interior layout of the institution's new wing. Exuberantly swooping concrete walls form large-scale arches and exhibition niches that resemble the interior skeleton of an enormous eviscerated beast. The interior is populated with animal replicas on display, as if this prehistoric beast of a building had swallowed an ecosystem of contemporary species before going extinct. With humans and animal specimens occupying the same space, the Gilder Centre demonstrates one step towards reconfiguring our relationships to animals, shifting the hierarchy of power and mechanism of agency away from a eugenic elite and towards a more variegated public. Here, the diorama has expanded to the entire museum interior and humans are included within its ecological display. Nevertheless, all the animals remain captive within this expanded and reconceptualised dioramic context. The architecturally ingested human visitors and animal artefacts together glimpse a glimmer of the outside world through the building's open nostril-like clerestory. Escape into the city beyond is almost visible and teasingly palpable.

Over thirty years prior, on the European continent, such architectural liberation was achieved by the masques of John Hejduk. A nomadic tribe of structures, each with their own distinct profile, character and story, these exist on a scale that lies somewhere between a full-size building and a sculpture. Though born from the context of a specific city, the masques move freely from place to place, occupying and inventing new territories as they accompany Hejduk on future travels. In this sense, the masques constitute a form of dioramic urbanism, staging novel situations and scenarios that transform a given context into a machine for new forms of knowledge. What appears playful is also "deadly serious [...as] it invades and repopulates cities en route

[...overturning] daily routines and commonplace thoughts, upsetting hierarchies and crowning fools".<sup>7</sup> The masques turn the logic of the diorama on its head – instead of containing taxidermy animals within the monumental form of an institution, Hejduk animates architectural animals and lets them run wild as companions to their urban and human counterparts, providing an opportunity to challenge the fixed monumentality of the European city as well as the rationalism of modernism. The realism of the traditional diorama is thus replaced by the surrealism of the situationist *dérive*. Whereas traditional dioramas kept a safe distance and ensured a privileged gaze from human viewers to mounted animals, the projects discussed below assert the formal and operative potential initiated by creatures that, like Hejduk's masques, break free from hegemonic institutions, be it museums, aquaria, farms or even the atmospheric bounds of our planet, to produce a startling and surreal new atmosphere of near-Earthly existence.

#### THE CHARACTER OF CARICATURE: LIKENESS AND TRUTHINESS

If the dioramas of Akeley Hall used realism to simulate a particular version of truth, the projects discussed here use representational strategies aligned with caricature as defined and discussed by art historian Ernst Gombrich and psychoanalyst Ernst Kris in their 1938 essay 'The Principles of Caricature'. Unpacking the relatively recent history of caricature, the two Ernsts describe it as an art that is less interested in "proximity to reality" than in a "projection of an inner image" and a "penetration of the innermost essence of reality [...] to reveal the character, the essence of the man".<sup>8</sup> By deliberately distorting, simplifying and exaggerating the physical features and behavioural traits of human characters, caricatures produce a "comic sensation" and a "likeness more than mere imitation could be". Despite their often primitive and unserious appearances, caricatures manipulate subject matter to sincerely transform an audience's perception: "[The caricaturist] consciously alters his model, distorts it, plays with its features, and thus shows the power of his imagination – which can exalt as well as degrade. Instead of an objective portrayal of the outer world he substitutes his subjective vision".<sup>9</sup>

Similarly, the political satirist and contemporary living caricaturist Stephen Colbert promotes 'truthiness', the practice of understanding the world through what feels right 'in your gut' rather than by thinking with your head. "I don't trust books," Colbert explains. "They're all fact and no heart... The truthiness is, anyone can read the news to you. I promise to feel the news at you."<sup>10</sup> Truthiness capitalises on likeness, emotion and charm to remake the world in the image of our desires. While Colbert's career-long commitment to propagating truthiness is in part a tongue-in-cheek gag lampooning conservative sensationalist news outlets, it also attests to a larger cultural shift in which exaggerating essence constitutes a truer identity than reality. Truthiness may be truer than truth.

While caricature is often prematurely dismissed as an overly reductive or one-dimensional rendering of a character, we see renewed potential in leveraging the caricaturist's tactics of visual simplification, bodily distortion and serious pleasure to amplify subjectivity and architectural agency in the built environment. When applied to architecture, the notion of a building 'having character' and 'being a character' enables a mindset in which built matter actively participates in tandem with human actors to affect how the world looks and operates.<sup>11</sup> The notion of a building 'becoming a caricature' does not detract from the nuance of personality, but rather reinforces both the imaginative intention required to exaggerate character traits and the truthful narration enacted by those characteristics. The artist Mike Kelley situates caricature in relation to the contemporary art of the 1980s, especially as it informed practices of biomorphic abstraction and aesthetics of "sculpting with flesh".<sup>12</sup> In a related spirit but with disciplinary-specific techniques, caricature also informs a cohort of architectural work that foregrounds human interaction with live animals and creature-like built forms. By animating inert form or by outfitting live animals to engage the environment in new ways, these creaturely caricatures help articulate new understandings about the world.

DUDE RANCH DOPPELGÄNGERS:  
ANIMAL FARMATURES AND FARMLAND WORLD

Design With Company's *Animal Farmatures* lets loose animatronic creatures into the agrarian landscape of the American Corn Belt. These livestock-shaped overscaled farm implements simultaneously cultivate farmland and entertain adjacent interstate car travellers and future high-speed cross-country rail passengers.

The Animal Farmatures are zoomorphic caricatures of conventional farm implements. Drawn primarily in section, each of the six different Farmatures takes the shape of a simplified animal silhouette which is stuffed with technological apparatuses. The beast-machine mashups cleverly couple animal anatomy with mechanical functions. For example, the Cow Combine's head serves as the 'primary intake unit', using its 'teeth' to cut grain from the stalks and ingest it for further processing.<sup>13</sup> Threshing and winnowing occur within an abdominal cavity and, in full comic effect, the fully 'digested' grain berries are expelled by conveyor belt through an aptly located anal aperture.

Drawing explicit cues from Jean-Jacques Lequeu's famous rendering of a cow stable in the shape of an Assyrian bovine, the Animal Farmatures restake a claim

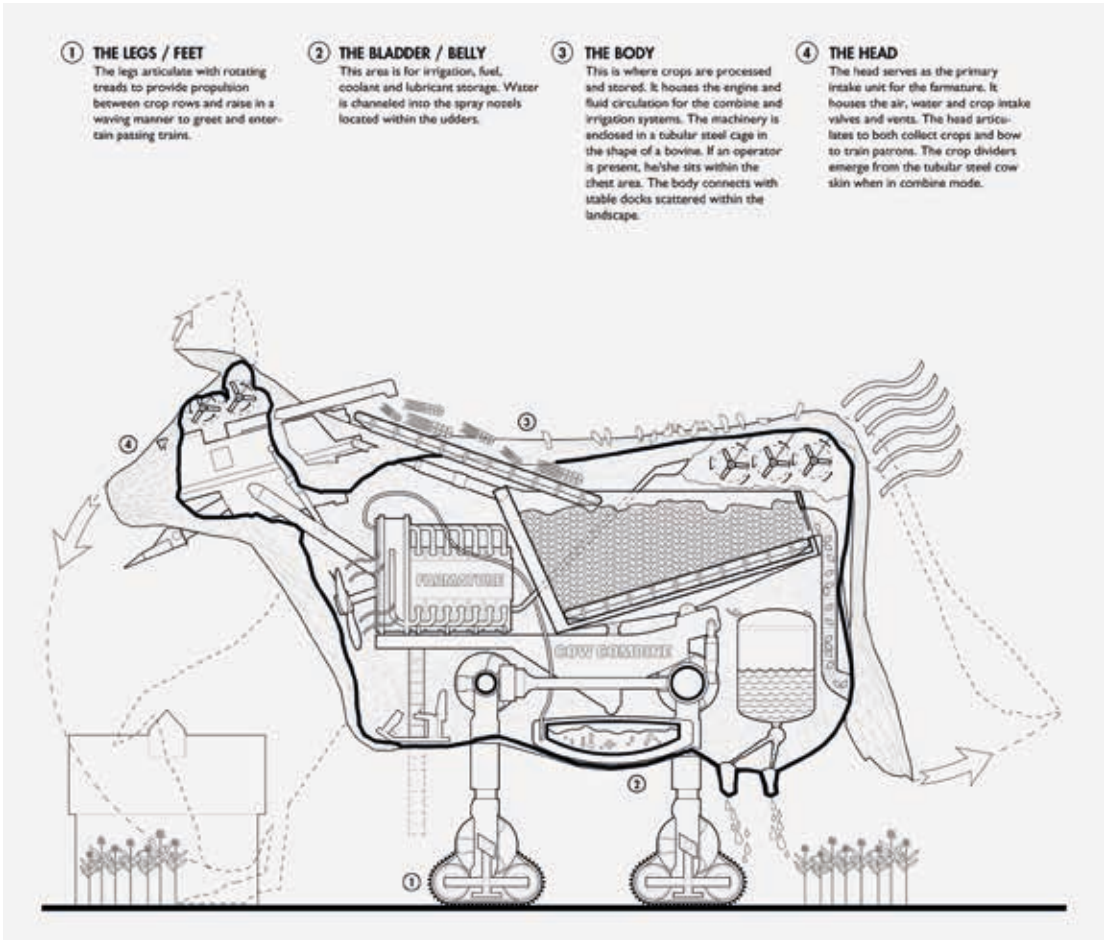


Fig. 1: Design With Company, *Animal Farmatures*, 2011. A section cut through the Cow Combine reinforces the familiar silhouette of the cow and delineates internal mechanisms with suggestive plausibility but without technical specificity.

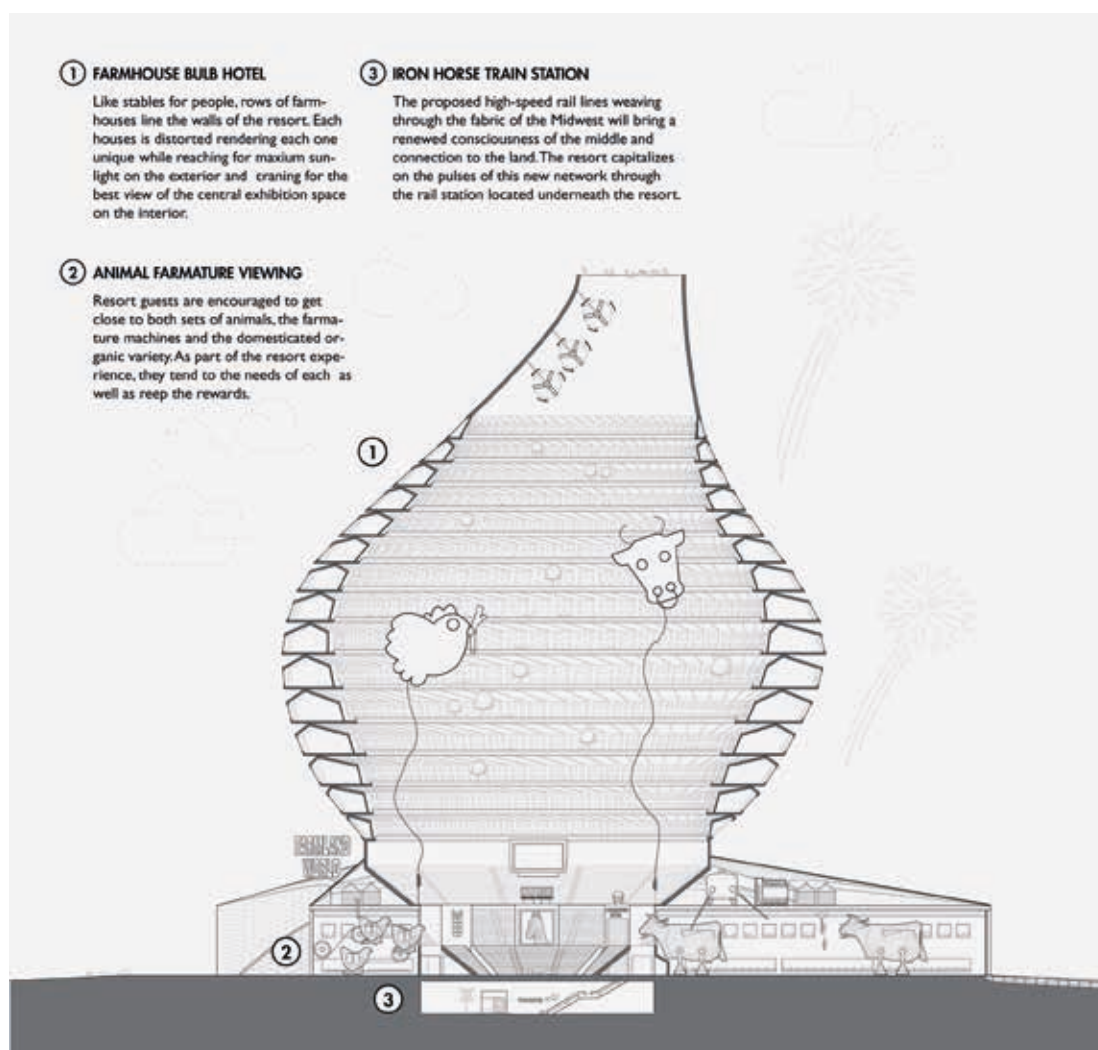


Fig. 2: Design With Company, *Farmland World*, 2011. While evoking Étienne-Louis Boullée's canonical drawing of the *Cenotaph for Newton*, the simple linework section through *Farmland World* includes details of human occupation, including an array of hotel rooms, stadium seating, jumbotrons and signage.

in the French theory of *architecture parlante* – buildings that use symbolism and pictorial reference to explain their function and identity. *Architecture parlante* is perhaps an ultimate manifestation of caricature in architecture: it exploits perspicuous visual likeness to communicate ('this building is for cows!'), it exaggerates the scale of familiar elements to produce laughter and surprise ('that cow is much too big for this pasture!') and it indulges in bodily and tumescent forms to insinuate sexuality and to project personality ('is that building coming on to me?').

While the Animal Farmatures benefit from all of these qualities of *parlante*, they also push the techniques of caricature in new ways. Lequeu's cowshed is rendered with charcoal shade and shadow, both to heighten its sublime setting and to convey a sense of depth and realism. While colour renderings are included in the suite of representations for the Farmatures, the primary architectural artefact is a cartoonish section drawn in hard-line black strokes (Fig. 1). The bold outline reinforces the familiar silhouette of the cow, and the unrendered technique liberates the architects to delineate the internal mechanisms with suggestive plausibility but without technical specificity. Like a diorama, the section reads

in a kind of two-and-a-half dimensions, as the mechanical viscera are represented with both faux-illustrated depth and diagrammatic vitality (e.g. big arrows, air flow markings, drips of water and dashed lines indicating movement) atop an emphatically 2D animal outline and scenic backdrop. The drawing stages a truthy appeal: it instructs us how the architecture *might* work without explaining how it *really* works. Instead of the sublime realism conveyed in Lequeu's uncanny caricature, the Farmature's dioramic caricature intentionally and humorously detains veracity and leaves elements of its realised identity open for interpretation and further intrigue.

The Farmatures facilitate new agricultural interactions between farmers and their implements, to be sure, and in turn they also suggest a new sense of subjectivity in the interactions between farmers and their livestock. And while the Farmatures contribute new possibilities for working farms, they also interact with the non-farming public via a franchised chain of agro-tourist resorts called *Farmland World*. 'Part theme park and part working farm', *Farmland World* invites people to interact directly with the Farmatures, as well as live farm animals, in ways that



transcend the visual spectacle provided by vehicular windows. Within *Farmland World*, humans enter the agricultural diorama.

As a slightly cheeky experiment in crowdsourced labour, guests to Farmland World perform farm tasks as a voluntary distraction from their humdrum urban lives, reconnecting non-farmers to the labour and mechanisms of their food production as a participatory alternative to ubiquitous factory farms. If in the dioramas of the American Museum of Natural History the detached public viewers are completely divorced from the killing of animals required to fabricate the myth of patriarchal human-animal relations, then in Farmland World humans participate fully in the slaughter of animals required to sustain the populace according to the American culture of meat-eating. Humans have entered the diorama, with blood on their shoes to boot.

Formally, the section drawn through the bulbous interior arena of Farmland World (Fig. 2) evokes the geometric elegance and clarity of Étienne-Louis Boullée's canonical drawing of the *Cenotaph for Newton*. Akin to the comparison with Lequeu, Boullée's section is sublimely rendered with caricaturised light, shade and shadow, while the spectacles of Farmland World, including fireworks, parade balloons and the Farmatures themselves, are drawn with simple single-stroke linework. More importantly though, while the transcendental scene depicted by Boullée is devoid of almost any human scale or reference, which heightens the sublimely autonomous effect, the Farmland World section is complete with details of human occupation, including an array of hotel rooms, stadium seating, jumbotrons and signage. Humans emphatically belong within Farmland World. Indeed, soliciting human participation and worldly enthusiasm is the dioramic caricature's reason to be.

#### FAUNA FANS: NONHUMAN AUTONOMOUS SPACE AGENCY

Fred Scharmen's *Nonhuman Autonomous Space Agency* launches communities of live animals and robotic creatures into low-Earth orbit. The project leverages the communicative power of *charismatic megafauna*, "a species of animal that is well known and well liked, which serves as a stand-in and focal point for the complexities of the ecosystem in which it lives". For example, "Talking about manatees is a way to begin to talk about how we use the landscape of Florida and the Caribbean recreationally, and how to possibly change some careless habits associated with that use".<sup>14</sup> By invoking human empathy with their relatable anthropomorphic expressions and postures, manatees serve as a mascot for habitat conservation and responsible water use.

The Nonhuman Autonomous Space Agency continues the lineage of early experiments in space travel in which dogs, monkeys and rabbits successfully launched into orbit and subsequently returned to Earth. This time, however, a semi-aquatic habitat created within a hollow



Fig. 3: Fred Scharmen, *Nonhuman Autonomous Space Agency*, 2015. A line drawing of NASA's astronaut manatee combines digitally precise line-weight articulation with an analogue, organic flow to produce a caricature that conveys the manatee's character with an expression of confidence, curiosity and wisdom.

asteroid is sent into orbit for manatees and chickens to inhabit and explore. The exploits and interactions of the space-bound animals is carefully monitored by autonomous robots, who digitally broadcast their activities to an emerging public of Earth-dwelling human fans. In this way, the Space Agency aims to amplify the subjectivity of these nonhuman astronauts (both animals and robots) by giving them a comprehensible and emotional voice, understood by humans via the likes of Twitter.

The project operates via two prominent drawings. The first caricature introduces us to the actor playing the leading role: the suited manatee performing extra-vehicular activity (Fig. 3). The composition leverages the familiar pose and uniform of a human astronaut floating in space. As the manatee already exhibits anthropomorphism in its physique, the subtle modifications to the human suit to accommodate the sea cow's fluke appear strangely natural. The drawing combines digitally precise line-weight articulation with an analogue, organic flow to the lines themselves. This overtly drawn quality of the caricature heightens the manatee's character; while no excess lines are used to do so, the carefully composed wrinkles and expression on its visible face through the helmet convey confidence, curiosity and even wisdom. This is a manatee with agency. It aspires to be a revamped Vitruvian nonhuman person for our time.

The second caricature depicts a cross-section of the hollow ovoid orbital habitat (Fig. 4). Because of the curved surface of the ovoid's low-gravity hollow interior, the familiar features of an Earth-like landscape transition from section to plan and back to section again, lending a wonky sense of vision to quotidian elements such as trees, shrubs and rocks. The drawing demonstrates how what would otherwise be an extremely warped or exaggerated caricaturing of reality as we know it can simultaneously act as a truthy vision of the world (or outer-world) as we imagine it. Unlike the more painterly renderings of space settlements that NASA commissioned in the 1970s,<sup>15</sup> the simple colour fills and cartoonish outlines of the flora and fauna flatten the scene and challenge its viewers to reconstruct its spatial possibilities within the unfettered bounds of their imagination.

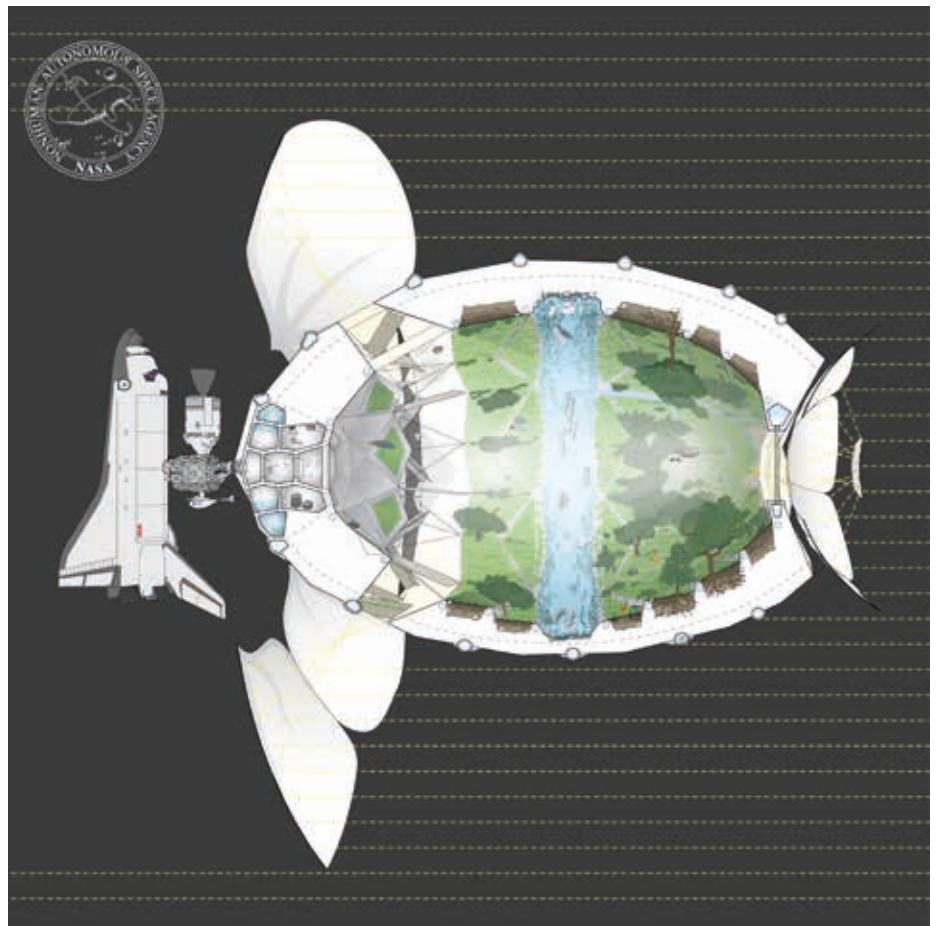


Fig. 4: Fred Scharmen, *Nonhuman Autonomous Space Agency*, 2015. The space station's cross-section cut through a hollowed-out asteroid features an Earth-like landscape illustrated by simple colour fills and cartoonish outlines of flora and fauna.

The extraterrestrial lazy river is itself a far-flung diorama. Unlike the dioramas of the American Museum of Natural History, this strange orbital diorama grants its resident creatures many new affordances of subjectivity and spatial (and outer-spacial) freedoms. Yet it also intentionally stops short of full human participation. Retweets and 'likes' notwithstanding, humans are limited to 'following' the activities from afar with almost no agency in their outcomes. In this way, the new 'NASA' is staging an anti-diorama. This model reminds human earthlings that they may not be the centre of the universe after all. This is not necessarily to rid humans of their burden of responsibility to 'save the planet', but rather to champion the agency of nonhuman actors in the complex ecological workings of our world(s). 'Liking' outer-space-exploring manatees on social media may just translate into a human cultural desire to 'like' and safeguard aquatic habitats on Earth.

#### SURROGATE SUBJECTS: *GULF COAST BESTIARY*

The *Gulf Coast Bestiary* positions an array of zoomorphic architectural 'characters' alongside a sanctuary for dolphins retired from entertainment captivity as well as other injured and recovering coastal animals. While many of the programmes of the sanctuary are not accessible to the public, the animal characters of its architecture provide image- and activity-based pavilions for visitor

interaction with the back-of-house scientific activities. For example, one character houses a discussion forum with access to the zoological lab below, while another pairs an apartment for a biologist-in-residence with locker rooms for volunteers.

The primary representation for the project is a wide perspectival drawing, with hard-line black strokes and precisely articulated swathes of bright colour fill. Photographic scale figures of human occupants are montaged into the drawing. The logic of caricature operates here on multiple levels. First, the architectural 'characters' are themselves zoomorphic caricatures. The characters are conceived as three-dimensional Tangrams, where a finite series of elemental geometric blocks are assembled into multiple configurations that solicit animal imagery. While the forms are specifically inspired by local endangered fauna (e.g. the bottlenose dolphin, whooping crane, gulf sturgeon, sea turtle and West Indian manatee), the abstracted colourful volumes simplify, distort and exaggerate the prominent features of their representative species. Occasionally, these bodily features even provide humorous affordances to their human companions; for example, visitors are invited to bend down and stick their heads into the posterior cavity of the caricatured whooping crane character, which doubles as a recording booth to record and listen to stories about wildlife recovery efforts. By reconfiguring

the same set of blocks among the multiple characters, the architecture reads as a coherent cast with distinctively enhanced individual characteristics. While the characters are iconic in their imagery, they do not convey established meaning to an existing constituency, but rather rally new publics around a movement of environmental engagement.

Second, the drawing itself is a caricature of an architectural rendering. Rather than being saturated with photorealistic textures and illumination effects, the materiality of built and natural elements are articulated with layers of speckles, hatching and other drawn patterns that suggest character without defining specificity. Additionally, by exaggerating the curvature of the horizon line, the drawing suggests that the Bestiary occupies a miniature planet – a visual effect that implies an architecture that can transform its context and produce an autonomous world (or diorama) of its own making.

The Bestiary is indebted to the drawings of John Hejduk's various masquerades, his "tribe of architectural animals" on wheels that "invade and repopulate" the cities of Europe.<sup>16</sup> As drawn representations, the red steel frames that articulate the Bestiary characters' geometric parts echo the heavy black outlines that delineated Hejduk's masques in his watercolour renderings. As operative propositions for the city and landscape, the Bestiary characters might register as Hejdukian masques embedded in place along a fixed platform. But while they may be stationary, the Bestiary characters leverage their perceived vitality as animate creatures to project surrogate subjectivity for the live animals in and around the building – a surrogate that enacts a responsibly anthropocentric opportunity for interaction.

If the dioramas in the American Museum of Natural History directed an institutionally controlled gaze inward into the constructed exhibits, then the Gulf Coast Bestiary leverages its cast of caricatured creatures to enable a bi-directional gaze inward and outward as the public peers into the privileged activities of the zoologists and out at the families of coastal species beyond.

## AN OBLIQUE (BUT NOT BLEAK) CONCLUSION

If we use social media as a litmus test for contemporary human desire, then the animal memes, GIFs and videos that frequent the average Facebook feed indicate a craving for connection with the non-human world that is expansive and illuminating. Not only does this impulse to see and understand the social, cultural and emotional life of animals cut across demographic boundaries, but it points us towards our most aspirational shared qualities of affection, humility and humour. While the caricature is commonly considered a disparaging medium, intended to make fun of or amplify faults and weakness, we see in its origins a more profound desire to extract a legible truthiness from an otherwise complex and contradictory world, often with an air of absurdity or humour. Not unlike these omnipresent internet novelty items, the architectural

caricatures discussed above deploy a selective amplification to highlight and manipulate qualities of the world that we would like to imagine and cultivate as the basis for our near-future reality.

Letting lively and literary creatures loose into our cities, hinterlands and beyond may not solve environmental problems directly, but it offers an oblique enactment of 'anthropocentrically responsible' agency in the world. Creatures connect us to something bigger; they give us license to suspend our inhibitions and disbelief in order to participate in the real-time myth-making that their fabulist subjecthood makes real. The Sustainment will not be televised (no form of technology will solve its problems or spread solutions), but its performance will be enacted by companion subjects of humans and creatures within an expanded cultural environment.

<sup>1</sup> Neyran Turan, "Measure for the Anthropocene" in *Climates: Architecture and the Planetary Imaginary* ed. James Graham (Zurich: Lars Muller Publishers, 2016), 120.

<sup>2</sup> Tony Frye, "The Sustainment and its dialectic" in *Design Philosophy Papers One* (Ravensbourne, Qld: Team D/E/S Publications, 2004), 37.

<sup>3</sup> Sam Jacob, *Make it Real: Architecture as Enactment* (Moscow: Strelka Press, 2012).

<sup>4</sup> Turan, 127.

<sup>5</sup> Donna Haraway, "Teddy Bear Patriarchy" *Social Text*, No. 11 (Winter, 1984–85), 54.

<sup>6</sup> *Ibid.*, 53.

<sup>7</sup> Anthony Vidler, "Vagabond Architecture" in *The Architectural Uncanny* (Cambridge: MIT Press, 1992), 209.

<sup>8</sup> E. H. Gombrich with Ernst Kris, 'The Principles of Caricature,' *British Journal of Medical Psychology*, Vol. 17 (1938): 319–342.

<sup>9</sup> *Ibid.*

<sup>10</sup> Stephen Colbert, *The Colbert Report*. Television programme. 17 October 2005.

<sup>11</sup> Joseph Altshuler, 'Animate Architecture: 12 Reasons to Get in Character,' ed. Cynthia Davidson. *Log*, #33 (New York: Anyone Corporation, 2015).

<sup>12</sup> Mike Kelley, "Foul Perfection: Notes on Caricature" in *Foul Perfection: Essays and Criticism* (Cambridge: MIT Press, 2002), 20–38.

<sup>13</sup> Stewart Hicks and Allison Newmeyer, "Animal Farmatures" in *Life at the Speed of Rail Competition* (New York: Van Alen Institute, 2011).

<sup>14</sup> Fred Scharmen, "The Nonhuman Autonomous Space Agency", 103rd ACSA Annual Meeting Proceedings, *The Expanding Periphery and the Migrating Centre* (2015), 500.

<sup>15</sup> Fred Scharmen, "The High Frontier, the Megastructure, and the Big Dumb Object", 101st ACSA Annual Meeting Proceedings, *New Constellations, New Ecologies* (2013), 540–547.

<sup>16</sup> Vidler, 207, 209.



# The Digital Renaissance

Anna Andronova

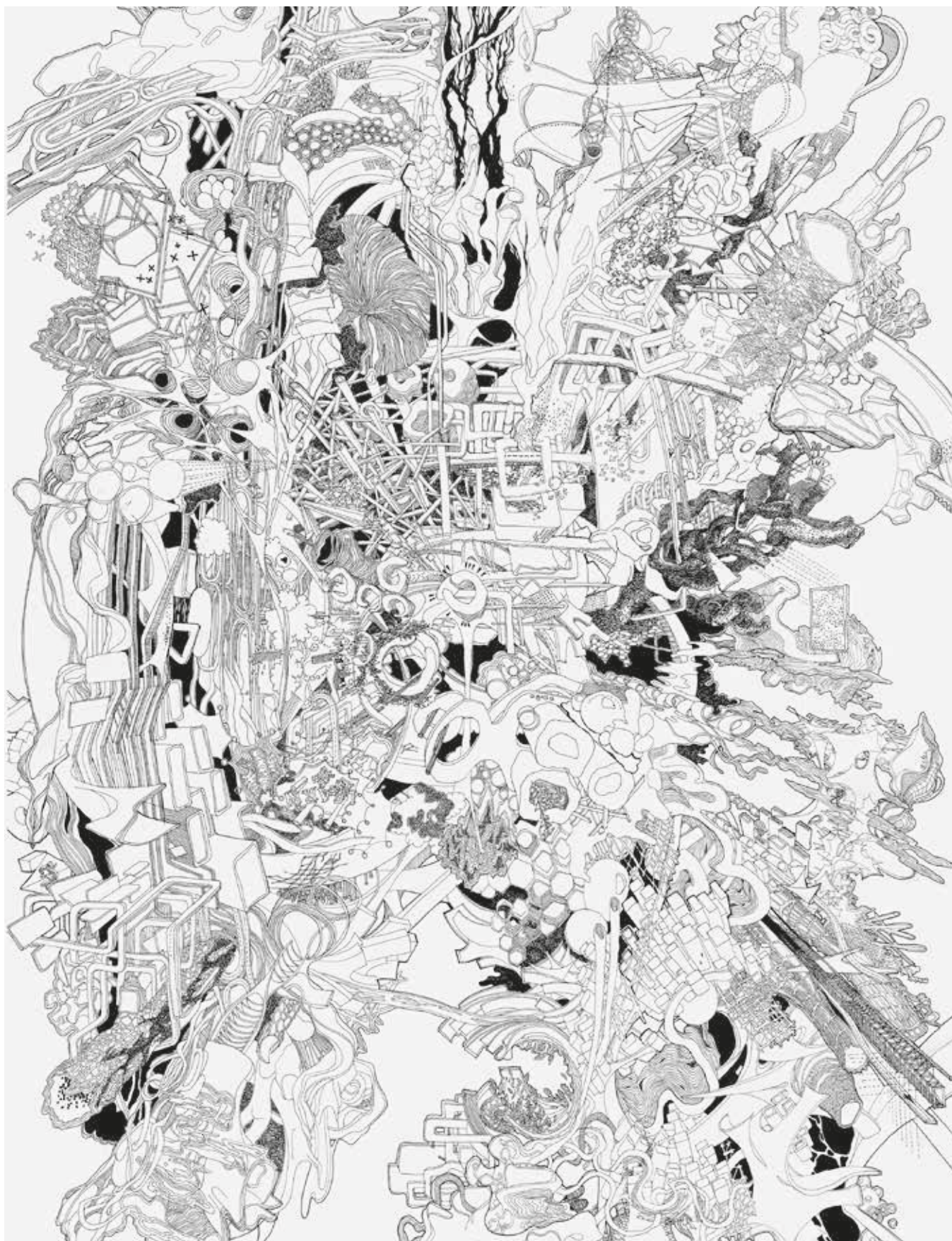


Fig. 1: Anna Andronova, collage.



With virtual reality gaming technologies, which lead both children and adults far, far away from actual reality; with the internet of things, which blurs the notion of distance; and with the rise of artificial intelligence, which can process infinitely faster than a mere human, how can we be confident that a future of architecture will still include bricks and mortar? This 'Digital Renaissance' project aims to reinvent how city spaces should be inhabited and explored in the future and how people should perceive themselves in this new reality. It aims to resurrect the lost harmony between nature and culture, alongside the feel of community and mutuality in a city.

It might seem contradictory to rely on analogue techniques while the project itself is purely about the digital. However, its intricacy of ideas and spatial complexity are only realisable by hand.

The project is split into five stages, from analysis to synthesis.

The first stage is an 'explosion', where drawing acts as a conductor for the flow of ideas and forms, both conscious and subconscious, resulting from one's inner experience. Collage is a perfect approach for finding images for a future city. The key principle is not to be restricted to any existing typology, but instead to be spontaneous.

The second stage is 'autopsy'. By referring to the first drawing, certain nodes are distinguished and captured in detail. Relationships between the biosocial fabric, an artificial transportation framework and an informational field are carefully studied using layers of drawing. Through this, the organism of a city is dissected to its 'flesh,' 'blood' and 'bones'.

The third stage is a 'fragmentation'. The overall urban landscape is studied carefully atom by atom; elements are depicted on separate pieces of paper and then arranged by dimensional qualities: point, line, surface and volume.

In the fourth 'alchemy' stage, all the systemised information is grasped, recombined into the full model and represented in sections. This perfect cube (figuratively speaking) is a 'womb' of a speculative utopia, to later be expanded.

The final stage is the 'renaissance' statement – a comprehensive model, encompassing the later stages of evolution. The large scale of the drawing allows the exploration of the landscape both in detail and in relation to the wider environment. The final step takes the drawing from a self-sufficient utopian vision to a living biosocial city system developed through representation.



Fig. 2: Anna Andronova, *Alchemy*, a set of three principal model sections (front view).



Fig. 3: Anna Andronova, *Alchemy*, a set of three principal model sections (side view).

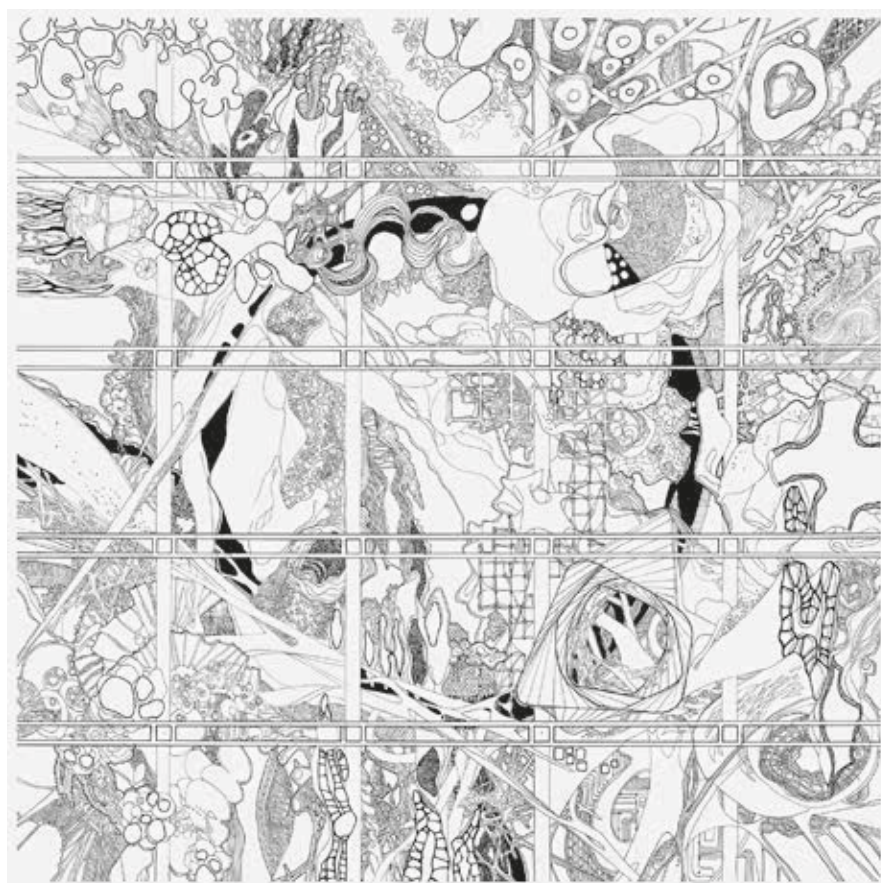


Fig. 4: Anna Andronova, *Alchemy*, a set of three principal model sections (top view).



# New Lohachara

Kirsty Badenoch

New Lohachara explores an architecture of wonder and the miraculous, weaving a fantastical future narrative through an imagined hand-drawn world. Within a context of increasingly hyper-digitalised representation, in which the architect is progressively further removed from the physical design and building process, analogue methods retain a physicality, an awareness of time and process and an engagement with poetic narrative that is lacking today more than ever. Through re-engaging with hand-drawing, New Lohachara looks to re-instil a lost wonder back into architecture, a wonder associated with the bygone narrative architectures of metaphor, motif and folly, a wonder that challenges possibilities and ignites the imagination.

New Lohachara is centred around the preservation of disappearing lands and cultures in the face of rising sea levels. It explores an architecture of wonder through the augmentation of nature: an architecture of [Super] Nature. Speculating on future potentials for the embrace of water, as opposed to defence against it, the narrative of the project constructs a new city that re-engineers the water cycle – a great water-processing well. The project is sited in Venice as a context for the extraordinary and the miraculous, a city historically both born from and doomed by water, taking inspiration from Italo Calvino's *Invisible City*, 'Isaura' – City of 1,000 Wells.

Piranesi's eighteenth-century etchings of Venice depicted the city through the eyes of the Age of Enlightenment – glorious architectural recordings of a grandiose ancient world. But through them he also challenged convention and extended his depictions to his own design – utilising representation as opportunity for his own personal imagination, romanticism and speculation on the past and future. The etchings become both historical records and future possibilities, depicting half-imagined, half-ruined places and incorporating mythologies within the fabric of their imagery. They were driven by – but not bound by – buildability, thus liberating the imagination towards early ideas of science fiction.

Jumping ahead to the 1980s, the Russian 'Paper Architects' Brodsky and Utkin employed a similar expressive technique and historical language in the visualisations of their dream landscapes. Operating between the worlds of architecture and fine art, they designed dense cities that

intertwined invention, memory and possibility, cities laden with mythology, critique and literary and political allusion within the context of Soviet control.

The drawings of New Lohachara draw heavily on such inspirations that explore, invent and criticise through the creation of romantic, illusionary worlds based within our own. Pen-and-ink rendering is by nature playful, appealing to an innate childlike sense of curiosity, allowing respite from reality for speculative thought and engagement through the imagination. It is visually reminiscent of times of narrative antiquity – and forgiven its exaggerations and inaccuracies due to its inherent human nature.

Compositionally, the drawings are in many ways traditional – constructed as dioramas or layered milieus and grounded within the genus of preservation – exploring a futuristic vision that is sensitive to the old. But unexpected perspectives explore abstracted and surprising angles, challenging the narrative through play and delight. The project was driven by an intent to critically explore the role of hand-drawing in contemporary architectural representation – and to challenge the architect's convention of plan-section-elevation alongside the neo-classicist painter's frame. The drawings were developed through studying, layering, 3D modelling, redrawing and collaged composition. In this way, they were constructed over time in a dialogue between research and design, between invention and accident and between pen and paper.

As architects working within a hyper-digitalised age, our toolset for the imagining and realising of spaces is vast and fast. We are like never before able to sketch, distort, morph and throw away ideas often faster than we can think them up. We can photo-visualise indistinguishably lifelike imagery, produce dizzying fly-throughs and even four-dimensionally occupy the virtual spaces we dream up years before the site has even been prepared.

To draw by hand requires slowness. It requires a physical presence of body and of mind to dwell within the spaces they imagine and construct. It requires patience, frustration and a certain number of accidents, the traces of which become bound within the final work. It allows space and time for occupation throughout its creation. Unlike photoreal renders, it is forgiven for its mistakes; it is allowed the space to breathe and be interpreted by the individual. It is allowed to exist simultaneously in the past, present and future. It is allowed the space to dream.

Fig. 1 (opposite): Challenges the vertical and horizontal planes of living below the water's surface, inside the great well. Boats are upended to become mirrored elevators, reflecting sunlight downwards as they move vertically through the city. Hot water processing pipes become tropical tree trunks from which hydroponic plantations are suspended, cultivating tropical flora in a [Super]Natural rainforest.





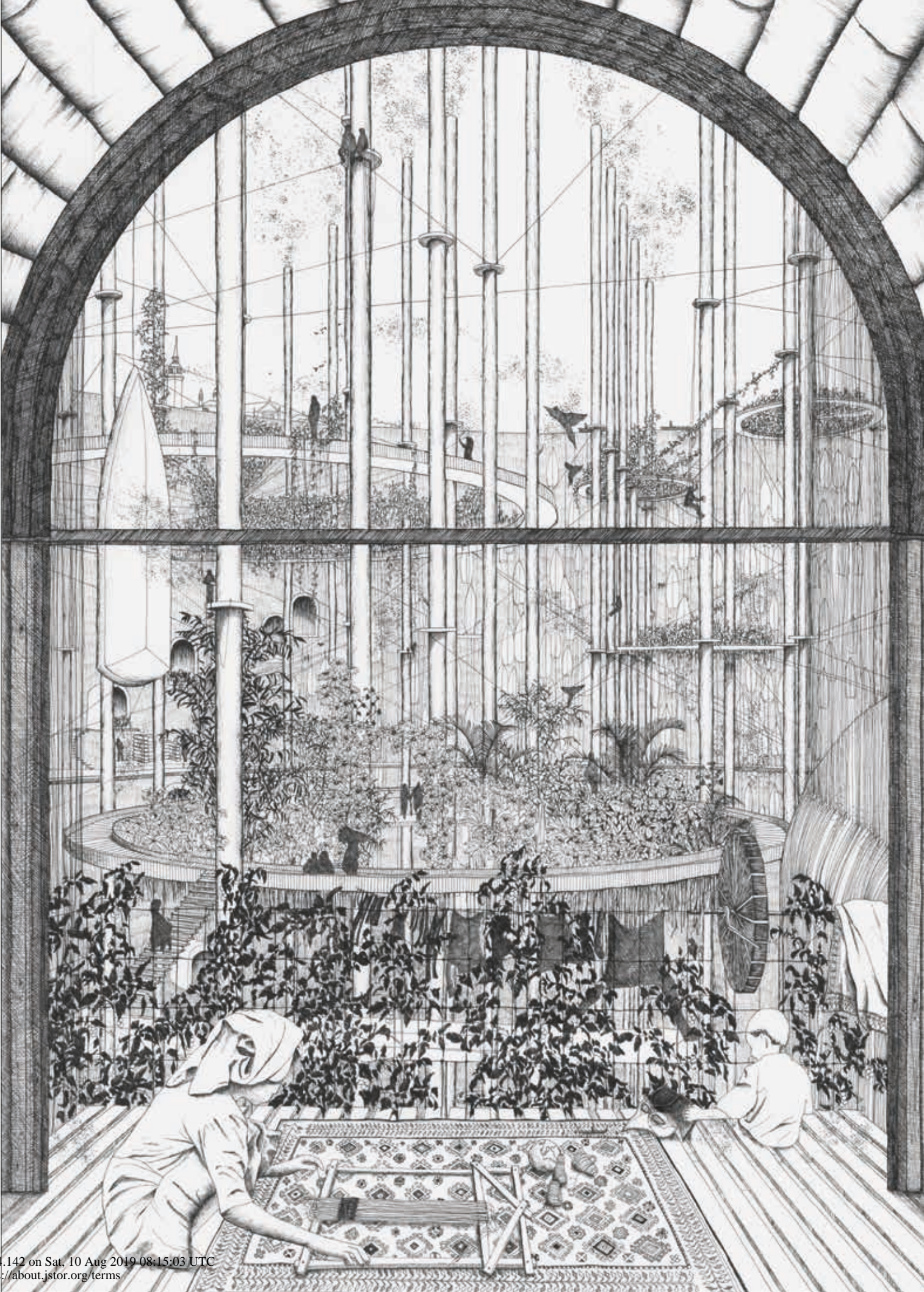




Fig. 2: *Super[Nature] I – Preserving Venice* takes on an abstracted cosmic perspective, a conceptual fish-eye blueprint for the re-engineering of the water cycle. Floodwater is drained from the Venetian lagoon into the great well below, in cycle with the lunar tides and the dancing of boats upon the water's surface. Venice hovers precariously just above the waterline, its magic amplified by the shrouding mist exhaled by the water-processing. With reference to Calvino, "an invisible landscape conditions the visible one".

Fig. 3 (opposite): Pulls the narrative into Venice, looking up at the sky from inside a Venetian well in reinterpretation of the Venetian Baroque painted ceiling. A rainwater-collecting chandelier hangs suspended delicately above the public square, while clouds gather overhead in celebration of water.







# The Restored Commonwealth Club

Adam Bell

The drawing form of the Restored Commonwealth Club (RCC) took a number of months to come together, initially by experimenting with digital collage techniques and fusions of digital and hand-drawing before choosing hand-drawing as the primary technique.

The evolution of the hand-drawing technique was in line with the complexity of the subject. This ranged from an elevation such as the Empire Clock – which integrates the dymaxion (Buckminster Fuller map) time zones of the immersive realm – through to the spaces of the British Empire and Commonwealth that are fluctuating between time and scale.

The drawings consist of a series of plans, views and details that give a short glimpse into an alternative realm. The drawings were crucial to support the approach and execution of the project, providing a brief insight with a great amount of detail while allowing for ambiguity and interpretation, enabling viewers to form their own ideas of the RCC within the collective gaze.

The key sets of drawings were the mnemonic details of the Club. Prior to this, only spaces in plan and perspective were developed.

The details were manipulated in such a way by using the drawing technique to break the connections of time, space and scale. This provided the opportunity to form large-scale mechanisms, landscapes and specific

periods of time significant to the British Empire, while still being contained within the mnemonic details housed in the Club.

This led to the analysis and representation of material reactions and interactions within the realm. Standard materials and objects distort, fracture and at times regenerate according to the movement of the Empire Clock.

Materials that could cope with the strains of gravity, time, space and scale were developed while referring to muscle tissue, bone and tendons.

This again re-investigated the spaces and the architectural details of the Club in an anatomical manner. The details at this stage were considered members of the Club, and this influenced the approach of the examination of particular studies. The drawings partly sliced and opened up certain details to reveal the inner workings, always considering the impact of the fluctuating environment. They also considered how future details might be installed and at times the possibility of infection, should the detail be rejected.

The drawings had to demonstrate shifts of time, distortions of space and manipulations of scale, while also respecting the society, Club and details that exist in the physical realm. In doing so, the drawings also represent the Commonwealth Club's vulnerability to extinction, something which it has experienced repeatedly.

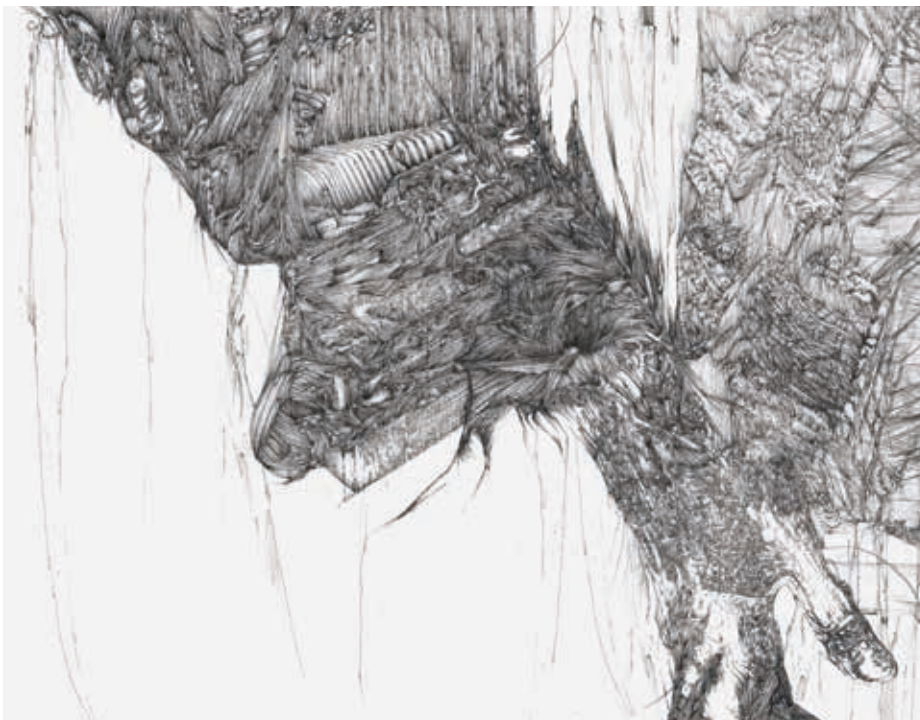
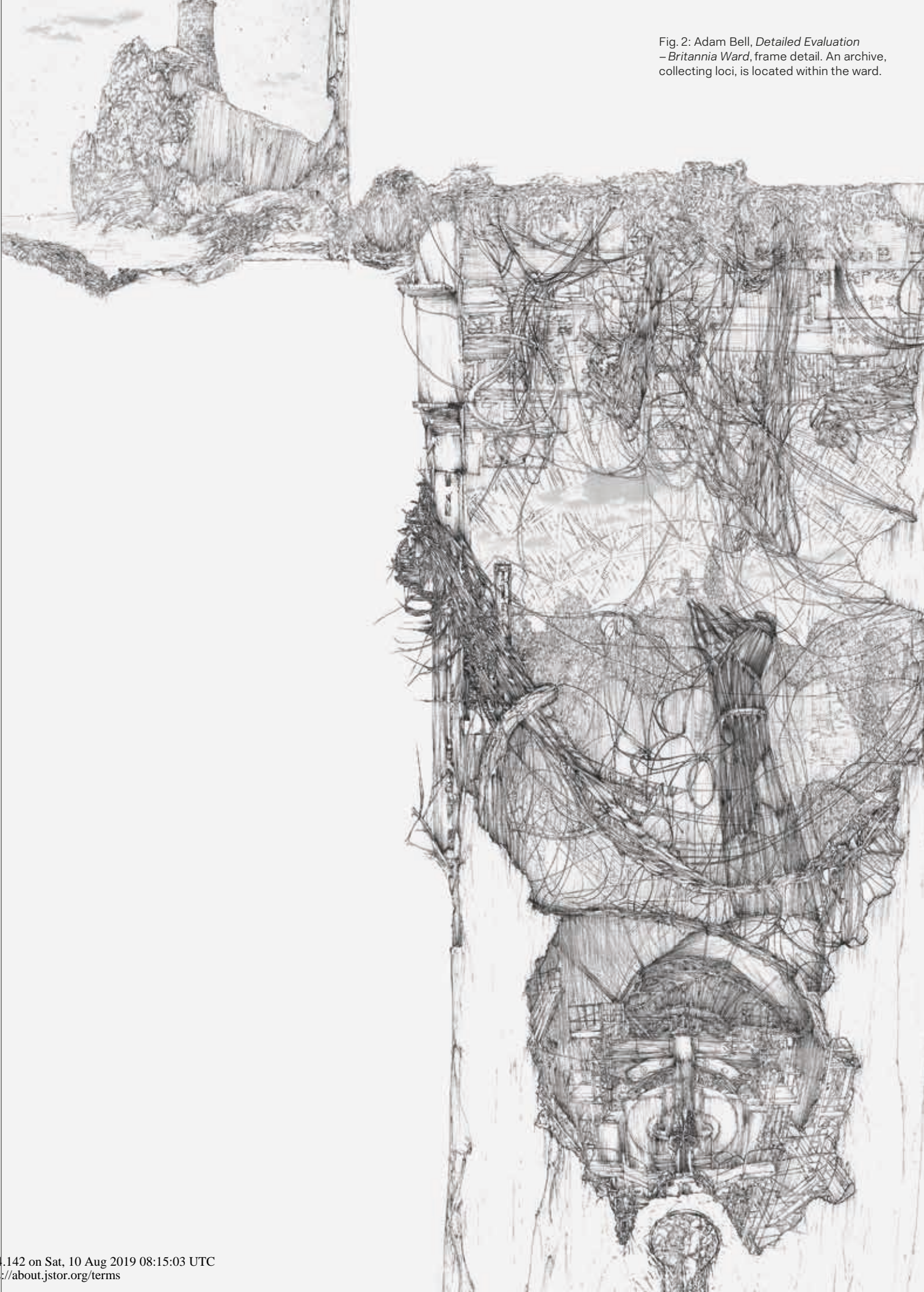


Fig. 1: Adam Bell, *Detailed Evaluation – Door Push Plate*. Mnemonic detail reveals the formation of the Club following the demise of the British Empire.

Fig. 2: Adam Bell, *Detailed Evaluation*  
– *Britannia Ward*, frame detail. An archive,  
collecting loci, is located within the ward.





# SCALEFULNESS

Kyle Branchesi

The city, as we have come to know any city, is a homogeneous soup. Bound, gagged and gasping for air, it no longer represents us, it no longer represents our thinking, but it lives with us and some say we are stuck with it. The qualities of its buildings are designed but are of no importance. They are so minutely different; they might as well not be different at all.

SCALEFULNESS is an attempt to undermine the conditions laid out by those who gave the twentieth-century city its shape. SCALEFULNESS produces an architecture at a scale beyond their scope. To place architecture back in the city, one must avoid the ground altogether. It must develop away, above and around the city, but never in the city.

SCALEFULNESS plays with colossal differences: of scales, of morphologies, of effects, of legibilities and of indices within its territory.

SCALEFULNESS is aware of the conditions below and laughs at them. The streets that make up the city below are built with cowardice. SCALEFULNESS doesn't know that it is arbitrary; the city above takes pride in knowing that it is.

Allergic to the ground, SCALEFULNESS is ambivalent about the ambivalent. The city above derives its character from objects taken from the city below. Generic objects are redeployed to become newly unfamiliar environments: the soda bottle house, the watch gear office complex, the ballerina tchotchke cul-de-sac, the tea kettle neighbourhood, the pistol grip district. SCALEFULNESS is the City of The Cold Press Juicer.

The city below is present only through a vague glimpse under one's feet. Duck boats span between lakes of grids, mountains are bound by radii, as stacks of suburbia are separated by motor grills.

Arrogant it is, and inconceivable it must appear. SCALEFULNESS believes it could not care less about context, it believes it demonstrates no awareness of siting. It believes it doesn't give a fuck about scale. But SCALEFULNESS does, because an awareness of ambivalence is just as important as ambivalence itself.

SCALEFULNESS acts selfishly, only investing in its own qualities, in its own relationships and in its own nonsense. SCALEFULNESS is unaware of its misgivings; it sees itself as an edifice, but behaves like a city.

SCALEFULNESS is represented within five panes, in a forced perspective that gives depth while never showing the full depth, size or limitations of itself. The colour used within the drawings removes the reality of the city above and forces its juxtaposition with the redundant, grey city below.

Fig. 1 (opposite): SCALEFULNESS, 2015.









Figs.2–5: SCALEFULNESS, 2015.

# The Silt House

Matthew Butcher

The Silt House project is a series of speculative structures that act as a practical and poetic investigation into the inhabitation of a future flooded Thames Estuary; a place in which the environment and the weather alter the material fabric of the architecture. These architectures are sited in and around Cliff Marshes on the south side of the river near the mouth of the Thames. They reside where the existing sea wall would be removed to allow water to splay during a flood.

The project primarily exists as a series of drawings in a variety of media. They are projections, intended to provide provocative visions of new ways of living with the increased threat from flooding caused by increasing global temperatures. The works aim to resonate with certain historic drawn and speculative designs that were produced in the 1960s and 1970s, such as those by Raimund Abraham and Superstudio. Here, the project seeks to draw from the ambitions of this earlier work, particularly to produce architecture removed from the problematic of building so as to explore the artistic, poetic and philosophical ambitions of the discipline.<sup>1</sup> In order to embody this legacy, the work utilises certain methodologies of drawing that seek to sample, then reappropriate, this earlier work to generate new architecture in a new context. Methodologies of drawing are also used to create images that are analogous to the character of the architecture and its relationship to the landscape.

## THREE ARCHITECTURES

Within the project, there are three main buildings: the Silt House, the Filter House and the Chapel. The Silt House, a communal residence, uses tidal processes to change the levels of comfort in the building. During the flood season, nets around the structure are set up to slow down the water in the estuary, which in turn allows sediment to fall and build up on top of the house when it is submerged by high tides. This build-up of sediment acts as insulation for the building during the winter months. Secondly, during a high tide, water is allowed into the house, washing out sewage that is then ejected through a pipe in the back of the building. This process clears the building of its waste – essentially, when the land floods, the building buries itself and shits itself. The Filter House operates as a house and saltwater filtration plant. Here, the filtration process, driven by tidal movement, alters the internal spaces and form of the building. As part of the process to purify the salt water, glass chambers fill up with steam, obscuring views through the house and back across the landscape. The third and last of the buildings is the Chapel, which acts a place of refuge and sanctuary within the landscape. Its floor takes the form of an undulating surface that can also provide places to sit or sleep. The building can only be accessed at the lowest tide and is often completely submerged by water.



Fig. 1: Matthew Butcher, *Axonometric of Silt House*. The building form is developed by identifying, then synthesising, key formal tropes used by Raimund Abraham.

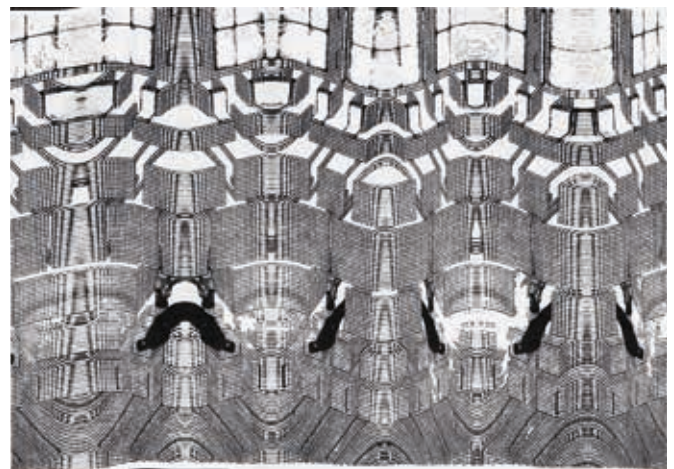


Fig. 2: Matthew Butcher. Texture for formal invention created by dragging a copy of a Superstudio drawing across the surface of a scanner while it is scanning.

The operation of these buildings in relation to the flood plain aims to create architecture that is explicitly of the ecology and the landscape in which it sits. It can be seen as a conduit attempting to channel the poetic characteristics of natural processes, including the very floods that wash over it. Where architecture traditionally sets out to protect its occupants from the unpredictable nature of the environment, the Silt House merges the flood into and through the building.<sup>2</sup>



During the development of the project, there were two main design methodologies that sought to appropriate existing avant-garde architectures, in order to ensure that the Silt House maintained reciprocity to these early designs.

The first of these was an analysis of the work of avant-garde architect and poet Raimund Abraham, and in particular his *10 Houses* project (1970–73).<sup>3</sup> In *10 Houses*, Abraham presents us with a series of poetic and drawn explorations of architectures existing in a non-specific landscape. These designs contain a series of motifs, including specific materials, burial mounds and formal components, which mimic natural forms. Together, these were understood to comprise a kind of topological key – a grammar of sorts – which was then developed to shape the spatial and formal logics within the Silt House. For instance, we can see the undulating cloud-like forms present in the basement of the *Earth-Cloud House* (1970) carried over to the Silt House, not as stratus-forming vapour but as wave-like forms that echo the way sediment and mud settles after the tide has withdrawn. The semi-burial motif seen in most of the *10 Houses* series works its way into aspects of the Silt House as the building is slowly buried beneath the sediment of the estuary mud flats. Finally, the presentation of spaces seen in the *House with Three Rooms* (1972), that appear to be carved from solid matter (rock), reappears in the Chapel. Also present is the idea that Abraham's architecture, within *10 Houses*, is formed as much from materials such as concrete and glass as the landscape itself. In the *House with Curtains* (1972), we see the billowing fabrics rise up, deforming the house's gridded structure. This motif is then seen in the desalination chambers, which, when in operation, fill up with steam that distorts and blocks the views through the building.

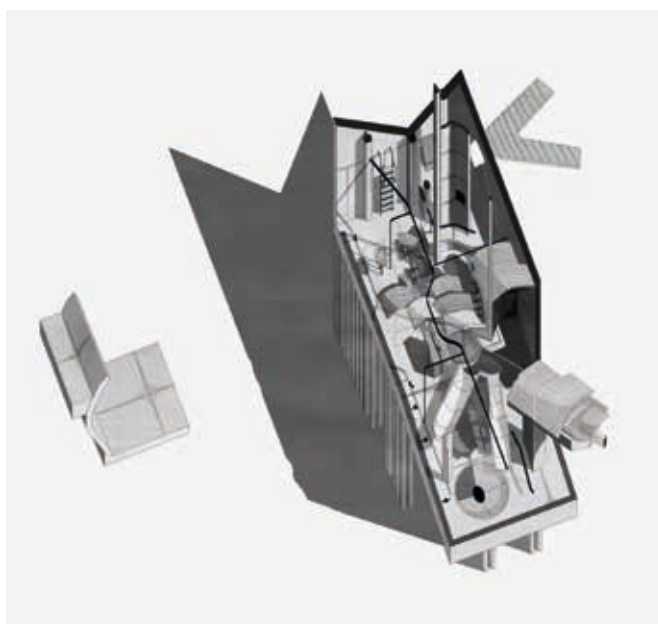


Fig. 3: Matthew Butcher, *Axonometric of the Chapel*. Forms were created by using the texture seen in Fig. 2.



Fig. 4: Matthew Butcher, Interior of water filtration plant within the Silt House project. Drawing created by scanning and photocopying a photograph of a project model.

The second drawing methodology applied is mostly seen in the truncated cone-like forms of the interior of the Chapel. The modulations of these forms were created through the reappropriation of a drawing by the architectural practice Superstudio. A reproduction of the drawing was dragged across the surface of an image scanner while it was in the process of being scanned. The result is a direct mapping of the action and the scanning process (Fig. 2) – a physical imprint of the drawing as it moves through time and space. The process acts as an attempt to capture the shift between the material of the drawing and its eventual digitisation within the scan, from material print to immaterial data.

Out of this new materialisation or abstraction of the original Superstudio image, a series of forms were then identified in the image and spliced out of it using Photoshop. This was achieved by tracing various contours and lines within the new image. This process could be linked to sampling in music, where a digital copy is taken from an existing audio recording and can then be manipulated and reproduced in different ways. Although a clear distortion of the original image, this action could be seen as an attempt to draw out an essence of the original sampled architectures; an intrinsic formal and aesthetic logic from the original source that can be carried forward to another time and place. In this case, the reimagining of the Superstudio grid is open to different constellations of meanings.

### IMAGE IN FLUX

Drawing is intrinsic to the project, as it can seek to embody and represent buildings that otherwise would exist in a constant state of flux. This is demonstrable in Fig. 4, where the original drawing was photocopied and re-photocopied, creating a distinct grain, contrast and distortion. By activating the drawing in this manner, the image becomes degraded and, if the process is repeated over time, becomes fainter and fainter. Here, the drawing can be

seen as an analogy for the dynamic relationship of the Silt House building to the flood, emerging and disappearing within the silt and sediment of the estuary.

## THE FLOODED FUTURE

Paramount within the Silt House project is the use of distinct processes of drawing as a methodology for the development of the work, as well for as instigating and communicating its meaning. The drawing, in this way, aims to be part of the legacy of certain figures in the avant-garde, such as Raimund Abraham, as well as acceding to a sense within present architecture of operating in a constant state of flux. Here, the reciprocity between past and present and the movement between a stable and an unstable facsimile can be seen as analogous to the fluctuation of the proposed architecture and its reciprocal relationship with the environment. This provides us with a unique series of spatial and formal representations for the future flooded Thames Estuary.

<sup>1</sup> For further exploration of an architecture that prioritises philosophical and artistic exploration over building, please see: K. Michael Hays, *Architecture's Desire, Reading the Late Avant-Garde* (Cambridge, MA: MIT Press, 2010), 2 and Neil Spiller, *Visionary Architecture: Blueprints of the Modern Imagination* (London, Thames & Hudson, 2006). In both books, the authors explore certain canons and histories of theoretical or 'paper' architecture and its meaning as part of the discipline. Critical to their theses is the work of the avant-garde from the 1960s and 1970s.

<sup>2</sup> The ideas expressed in this paragraph, in particular the idea that architecture is traditionally seen as stable, and that by questioning this we can develop a more creative relationship towards the environment through architecture, is influenced by the writing of Jonathan Hill, specifically *Immaterial Architecture* (London: Routledge, 2006).

<sup>3</sup> Raimund Abraham's *10 Houses* project existed as a series of ten theoretical projects developed between 1970–73. The drawings are particular in their use of coloured pencil and graphite and all show isolated dwellings in unspecified landscapes. An extensive catalogue of reproductions of the projects can be found in Raimund Abraham, *[Un]built*, ed. Brigitte Groihofer (Vienna: Springer-Verlag, 1996), 53–67.

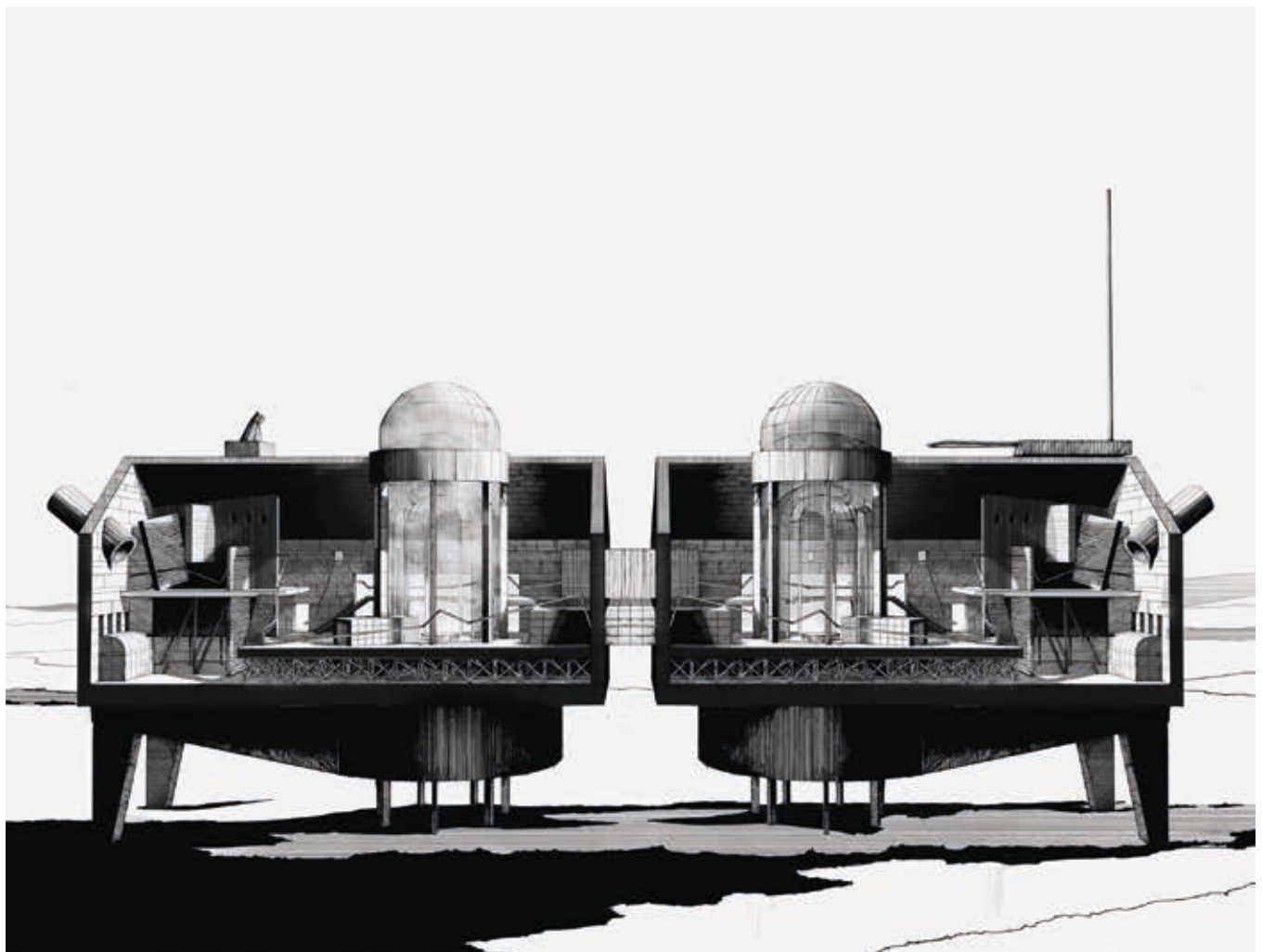


Fig. 5: Matthew Butcher, *Water Filtration Plant*.  
Section drawing by Tom Noonan and Matthew Butcher.

# Deviated Futures and Fantastical Histories

Bryan Cantley

The architectural drawing: a set of instructions, a legal document, a reductive artefact.

## INSTRUCTION(S) FOR CONSTRUCTION...

The history of (draw) has become a set of status quo commands given for the production of *building*. As part of this discourse, *the draw* has furthermore integrated written instruction; notations for the assemblies, chronologies and materiality of a desired conclusion. A product (*building*) other than itself (*drawing*).

Let us consider a new permission, where drawings might produce artificial mythologies. Since architectural drawing has traditionally referred to the reduction of information, or the creation of 'absolute truth(s)', my initial posture was to obfuscate that initial role of the *truth-maker*, and to challenge the typical relationship of occupant/viewer to the subject matter.

I suggest that the drawing could be the thing itself, in the nature of the '*Dasein*' – being there, as opposed to being elsewhere. This condition requires a recognition and perhaps occupancy of the liminal space between *there* and *elsewhere*. One might be aware of the space linking drawing and building and ultimately drawing and subject/object. The '(t)here' is where the drawing resides... where the occupant probes deeply in order to locate themselves, ironically distanced from any potential physical *conclusion*. Traditionally, the viewer and the suggested occupant

have had a degree of separation, setting up a voyeuristic mapping. This type of document collapses the binary condition of 'watching' vs. 'performing' within suggested architectural invention. We might assume that the future of architecture would be based on the *a posteriori* condition of allowing the drawing to remain in its current role.

## DRAWING (@LTERED) FUTURES

The premise suggests that *the draw* locates the *history* of itself instead of disclosing the *future* of its building/result. If we suspend the idea that *the draw* must develop in the future into a building, then we alter its histories. Therefore forecasts taking place after this suspension might arguably produce an alternative condition of possibilities. The notion of projection suggests a set of known data that inform a calculation/realisation implied by the observation: *drawing* (verb) suggests *building* (noun).

A trajectory that erases and refabricates its path as it moves, therefore eradicating typical *predetermined* policy. Speculation over calculation... investigation above representation... and amalgamation over segregation.

The termination of the drawing suggests that there is a spatial cessation. Nothing more is to be generated other than its specific objective. However, these drawing instructions suggest potentials for increasing expansion of the drawing, and therefore the potentials of the *thing*.

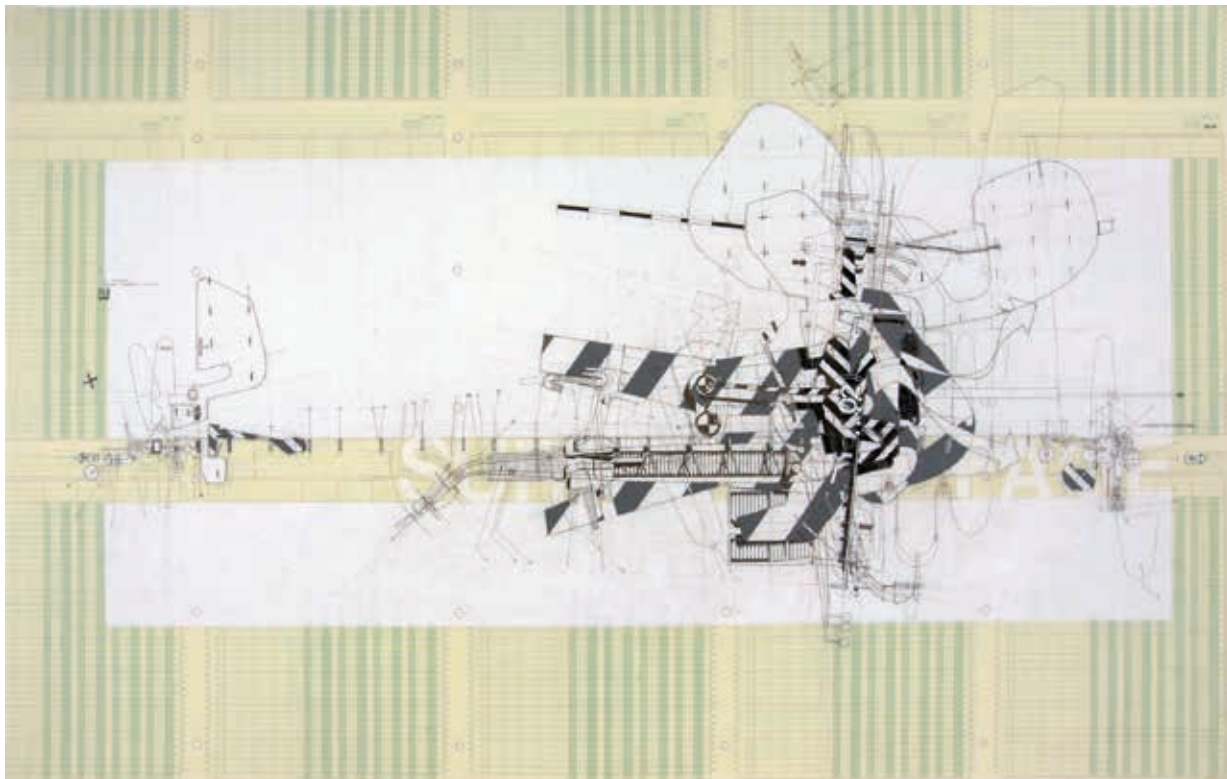


Fig. 1: Bryan Cantley, *SurFace Excavator[s]*. Photograph by Matt Gush.





Fig. 2: Bryan Cantley, *Native Topography 05/Series 02*.



Fig. 3: Bryan Cantley, *Native Topography 04/Series 02*.

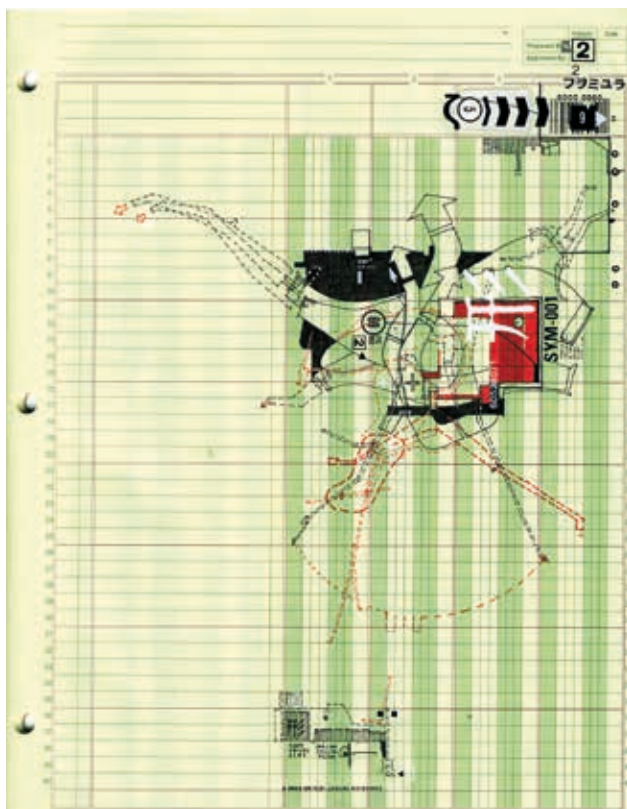
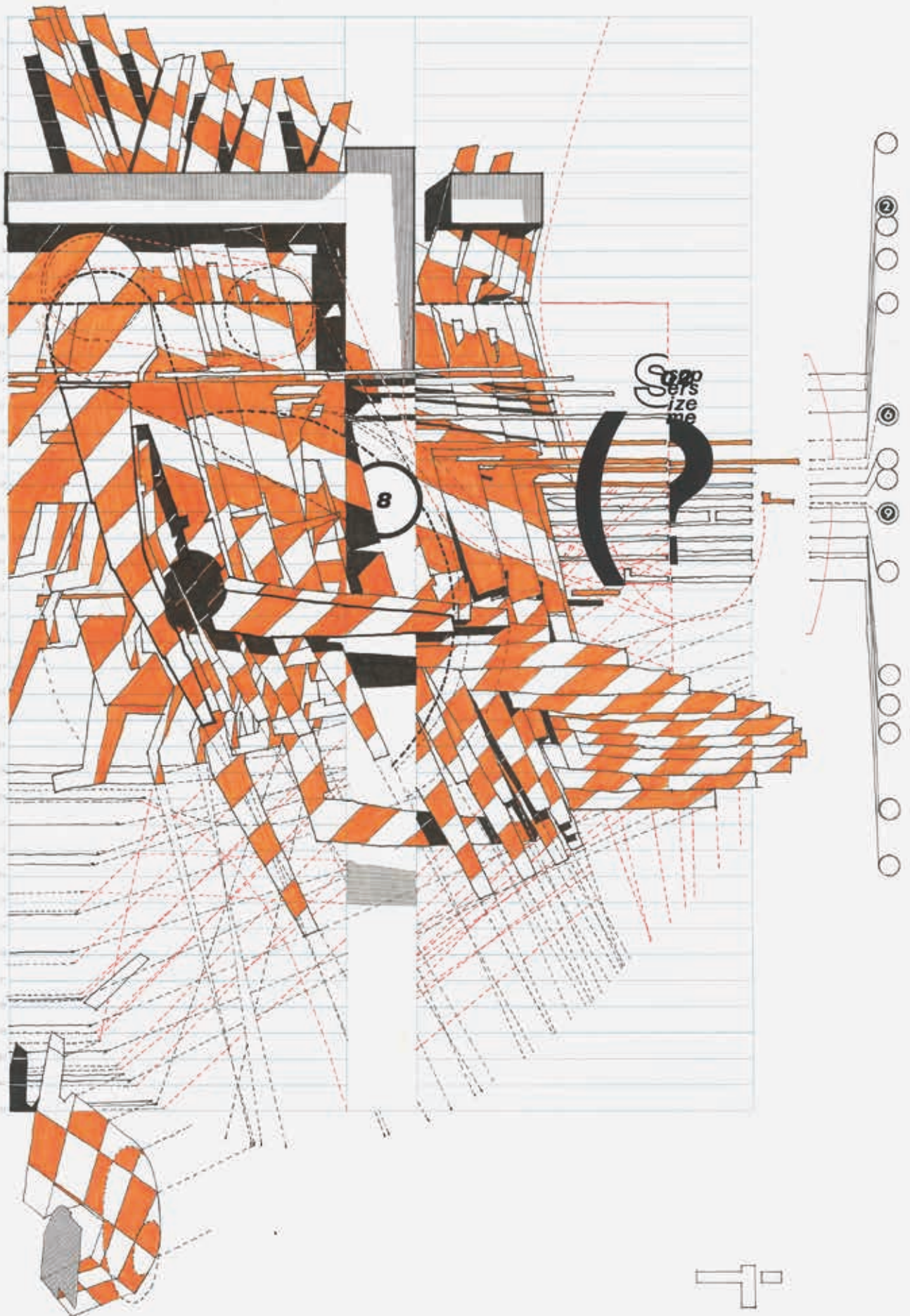


Fig. 4: Bryan Cantley, *Native Topography 06/Series 01*.



Fig. 5: Bryan Cantley, *Native Topography 07/Series 2*.







In human physiology, the interstitial space between organs and skin membrane is referred to as *thirdspace*. Fluid often collects here when the body is in a state of malfunction. The hollowness is designed to house internal organs, but serves as an overflow container for breakdowns of these entities. Interstitial space is not a new term in architecture and is quite common in drawing, yet most of the time we are encouraged to ignore or erase its presence. This is the *thirdspace* of drawing. When we define the architectural drawing as a documentation of *elsewhere* – of a thing's representation – then this covert zone becomes supportive at best, dismissed to clarify the object's definition. Construction drawings are meant as highly specific instructions for understanding, and have gone through the stage of reduction in order to make them clear without interpretation. When we define the drawing as a condition of the *here* (the entity itself), then the *thirdspace* becomes an active occupant in the construct.

This understanding allows for the generation of historical/contextual information that might be found on the drawing surface predating impregnation by the architect's hand/input. These particular drawings were fabricated using the imprinted graphic data, *Native Topographies*, to apprise and distort developing architectural data. Just as site influences structure and building distorts site, these broadcasted excavations initiate a call and response scenario that utilises a previously unrecognised (or dismissed) condition of the history of the page/surface. This allows for a most interesting deviation and eventual inclusion/acceptance of a context that emerges from the union of surface data and drawing.

## FANTASTICAL HISTORIES

The white space of any paper meant for the insertion of input information is at question – it is the pure space of unlimited innovation. It has no expressed history or context – it is an open system devoid of any internal/external reference except for its fixed dimension.

Enter the infected... the paper embedded with its own history of graphic impregnation. This information, the pre-printed forms meant for data insertion, is intended

to be the static information of prototypical variation. They are merely placeholders of generic data.

We may, however, make an analogy, in the sense that these printed histories convey a similar adjacency in concept to that of the building site/context. That condition comes to us as accepted truths – with their own terminus and finite value. My suggestion is that these artefacts may be utilised to inform *experimental* drawing, and therefore it can be argued that they offer potentials of discovery of unorthodox spatial prototypes. The chronicle and artefact of the printer evolves into part of the dialogue of architectural language.

We make a move from:  
Paper Architecture  
to:  
*Paper > Architecture*

This is a condition that I have labelled 'postliminal fuzz' – a circumstance of the recognition of liminal space, the physical and conceptual properties of the drawing surface and the production of new policies based on their collision(s).

## DEVIATED FUTURES

The context of the drawing evolves as the drawing progresses. The chronological references of *that which is fixed* and *that which emerges* are shifted to the extreme background. In this threshold region, the concurrent progressions of the two situations are foreground subjects. Information derived from the drawing begets additional drawing on top of the existing – its start-shape ever-evolving. It is convention to establish rule sets and standards prior to the launch of a drawing. With these constructs, the initial rules serve as a base upon which a second set of evolving and responsive rules are added, looking to discover the performance logics of how the ideas/drawings behave as opposed to their pure visual characteristics.

When we suspend the history of the history of (a) drawing to pursue itself, we, by definition, alter the aforementioned trajectory of spatial production and what it *might become*.

Fig. 6 (opposite): Bryan Cantley, *Native Topography 08/Series 2*.

# The Living Tableau

Pablo Gil Martínez

This set of drawings explores an architecture that could potentially behave as a numinous animal. The drawings show robotised units that operate as artificial animal organs, producing a series of effects – thermodynamic, behavioural, formal and functional – that will be later coordinated in a composition in the form of two variations of a building which are represented in axonometric projection. The buildings, composed as an aggregation of 'artificial organs', are to be perceived as a choreographed herd of intelligent organisms that is able to communicate fear, familiarity, divergence and understanding. The buildings form an ecosystem and also a performative living tableau that moves beyond our control.

This exploration uses different approaches to drawing. The first drawing (Fig. 2), aims to represent the exterior form of the different organs selected, understood as volumes seen from the outside and put together to attempt a first compositional result of the idea behind this exploration. It is a sketch of what could be the architectural result of this approach applied on a ceiling. It is certainly limited in its representational qualities. The representation does not even show changes of form, movement, texture, colour,

light or shadow. The action of the different parts, if it were to be represented, would require other drawing techniques. Instead, the role of this drawing is to fix the agenda of exploration that is being developed. It is a small confirmation for me that things are going in the right direction towards my vision, which is obviously changing throughout the process. But at this stage I was not interested in the truthful representation of a reality, but rather in discovering and developing my vision through various means. This involved prototypes on 1:1 scale, material experiments with students, developing the means to control and generate behaviour through robotic systems, producing construction drawings and making models. All these knowledge acquisition processes, running in parallel with the drawings, may appear only vaguely apparent for others, but the author sees all the behaviour, applied technology, materials, colour and shadows in them as they unlock the projected visions that Fig. 2 was helping to fix.

The second type of drawings are construction drawings (not shown) that mix reverse engineering, understood as a direct conversion from animal organs to artificial technology, and the repertoire of architectural technologies I have developed. They are sketches that are not there to represent to others how these parts should be built, but to make me understand how to build

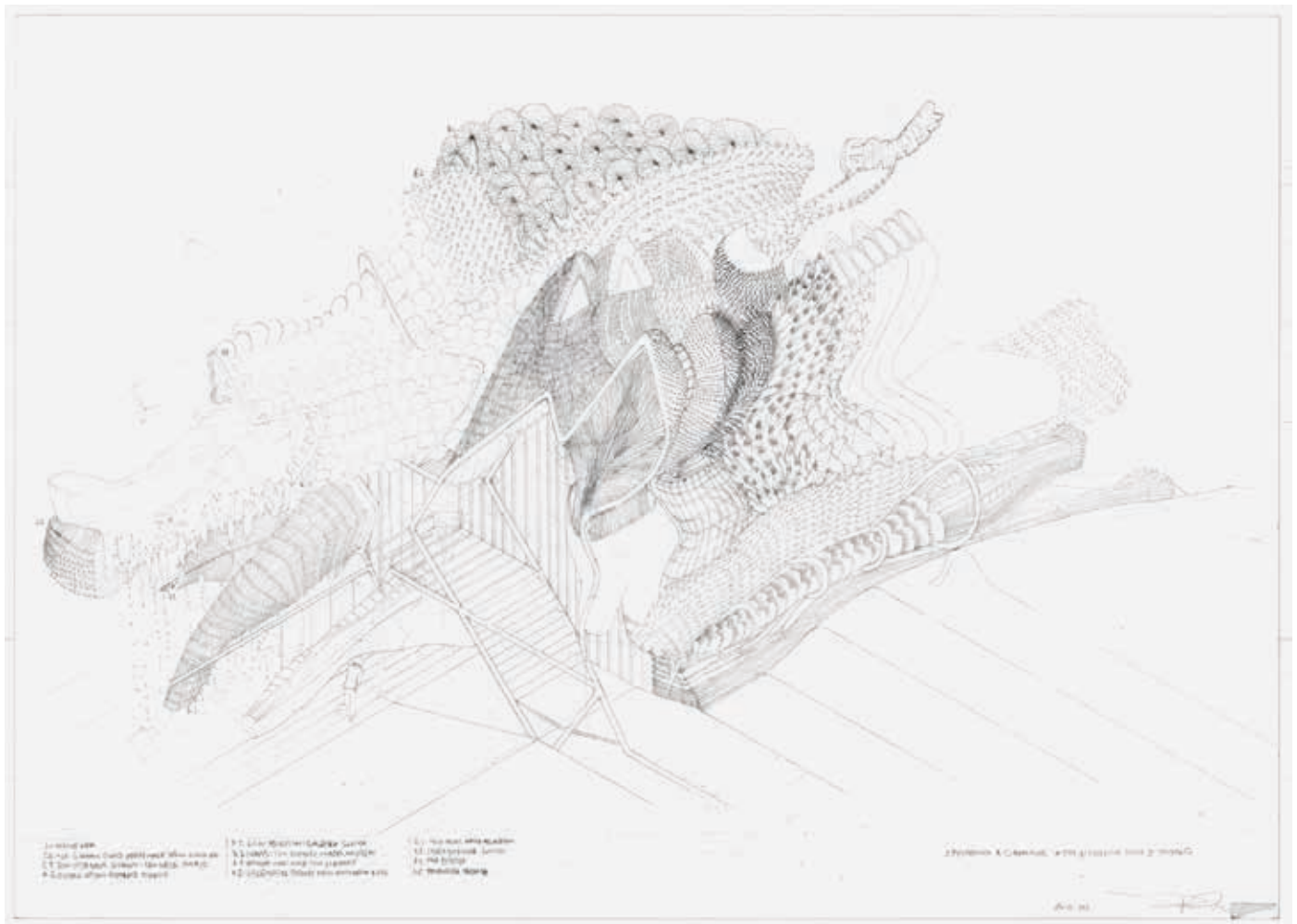


Fig. 1: Pablo Gil Martínez, *Building test*, 2013, pencil drawing, 840 x 597 mm. Collection of the author.



them, as I progress, with the help of sketches, back and forth from one technology to another, exploring the implications on the different levels of architecture – technique, experience, tradition, scale and so on. In this exploration, I have produced 120 Din-A1 drawings drawn in parallel with other means of experimentation that feed back into the drawings. The drawings here play the role of testing the necessary technology for my vision and are partial accounts of it, but are adequate to progress to further stages of knowledge needed to one day be able to execute one's vision.

Thirdly, Figure 1 applies the previous knowledge into the design of two buildings. These are tests of the feasibility of the different aspects that have evolved and are a definition of what is, or was, my vision of the architecture at that point. Again, they might be vaguely indicative to others of what I was after, but for me they mark a very important point in this journey and were a great joy to make, too. They confirm the growth of, and power gained over, the original ideas, and I see them as a demonstration that a building like this could be realised.

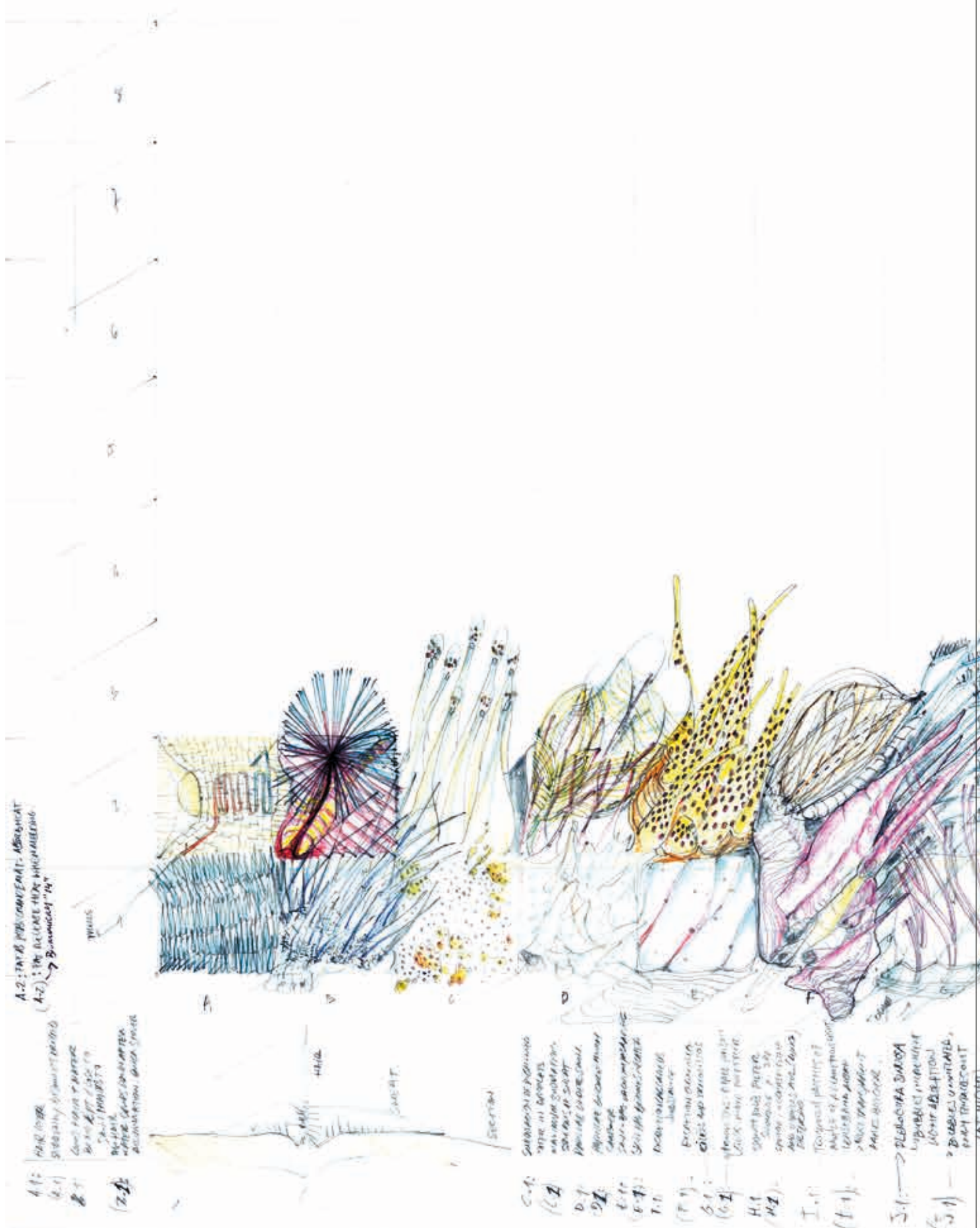
What these types of drawings share is that they are iterations of a projection that could require a whole lifetime to explore. Architecture as a living organism is an idea that first provoked me 14 years ago. It is potentially achievable with our present technology, but I have not mastered it yet. My understanding is that building is the only great objective that the field of architecture can offer me. From this point of view, I am not interested in thinking about representation as a theme, neither I have found, when I have tried, that drawings done in another way were more helpful or had more of an impact on the design that I was after.

I mean that shifts in drawing technique, augmentation, excursion, collage, mixing media, not even changing the diameter or hardness of the lead, which for me it is often 0.35 B, have no added value and in fact feel like delays in my process.

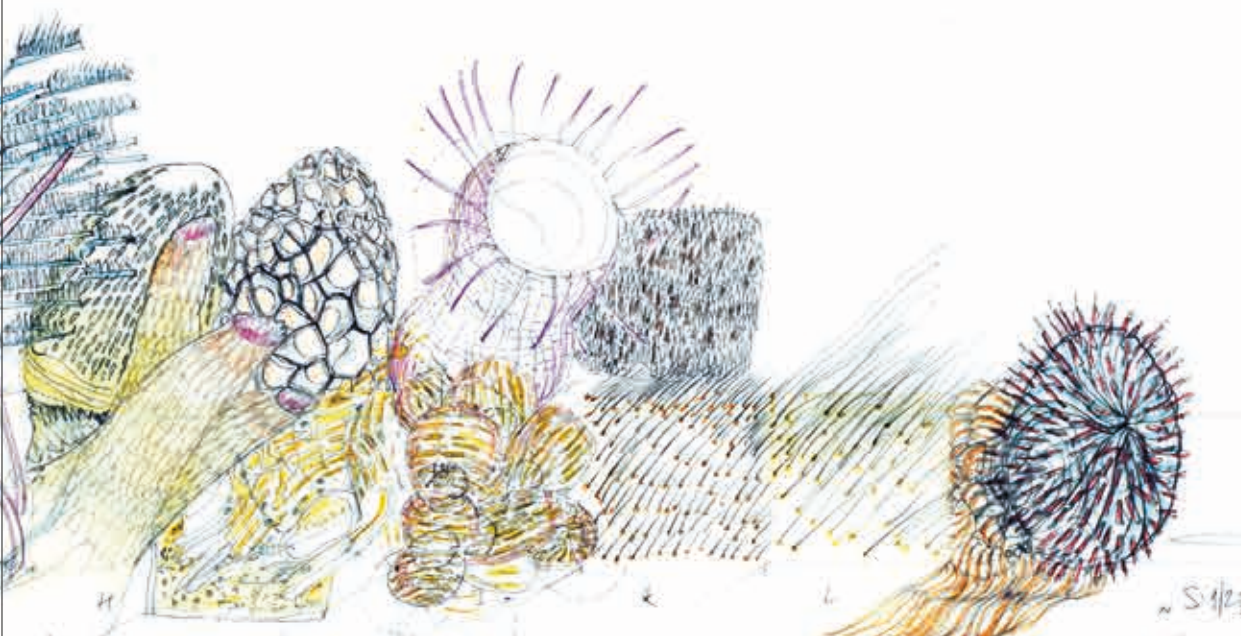
Instead, I see drawing as a tool for inquiry, with a great potential to think with objects in the same way that ideas or concepts rely on words, text and arguments. The joining of objects or the composing and organising of future spatial situations has a great ally in drawing. But drawings do not always need to be 'readable' to others. It is possible to conceive of codes that are only obvious for those who makes them; and maybe this would connect with the idea of style, a particular code linked to a particular individual. In the world of words, this happens, too: mumbling, speaking out, going through ideas mentally, extracting ideas or concepts from visual representations or memory or using metaphors or analogies to describe situations. These can all take place in an individual's mind, on their tongue or with their pen. They may be not yet ready for communication to others, as they do not operate yet in common code – phrases, books, lectures or other forms of communications that have become historically institutionalised. This idea was culturally retrieved in works such as *Finnegans Wake* – although no one can ever think of that text as the preparatory mumblings of Joyce; instead, it is a finished piece of writing in the form of a book, an institutionalised object with a particular structure.

We might use the analogy of practicing the piano to understand drawing. A music student spends hours going through fragments, exercising scales and arpeggios, getting ready for performance. That music is not to be heard publicly, but serves as necessary preparation for the musician him/herself. Drawing operates as a tool to envision all the complex dimensions involved in the design of a building. In this sense, a building could be understood as the result of the art of fixing into reality what you have been practicing to get built.

Fig. 2: Pablo Gil Martínez, *Building test*, 2013, pencil drawing, 840 x 597 mm. Collection of the author.







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K.1.2 → 2. SPREADS THE MOUNT  
K.1.3 → HOLE FORMED IN MOUNT  
K.1.4 → TO PREVENT POSITION  
K.1.5 → LITTLE MORE MOUNTAIN  
K.1.6 → COLLAPSE INTO THE CLAY

K.2.1 → THE MOUNT WITH MOUNTAIN  
K.2.2 → CONSIDERABLE, IT COULD GO OFF

K.3.1 → INFLUENCE DOWN OF MOUNT  
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LUMEN  
ADRIAN BROWER  
UNIT. 2. PALLY

# Speculative Morphology of Recurring Terrains

Ryota Matsumoto



Fig. 1: Ryota Matsumoto, *Imaginary Echo Chamber*, 2016, mixed media on paper, 68 × 74 cm. The biomorphic structures begin to merge into each other to form urban agglomerations.

My work speculates on the morphological transformations of ever-evolving urban and ecological milieus that are influenced by the eco-political reality of the Anthropocene epoch, emerging technologies of genetic modification, the advancement of biomaterial technologies, a socially constructed value system and rapid environmental transformation accelerated by the dynamic interplay of socio-economic, institutional and technological activities.

A background in architecture and visual art has led to exploring a hybrid approach in drawings, combining and merging both traditional and digital media in his working process. The various constituent methods of architectural, graphic and mixed media conventions are synthesised seamlessly in this approach. The drawing process involves base images that are composed by 3D software incorporating generative algorithms and then overlaid with traditional media such as acrylic, ink and graphite, as well as scanned images of found objects. These are then further processed and looped through stochastic and recursive operations by image-editing programmes and plugins.

Some of the works cycle through phases and take a long time to complete. In such cases, the completed work is then disassembled and reconfigured by implementing iterative algorithms. I repeat this process until I find unpredictable dialogues among newly assembled pieces. This almost autonomous, exquisite corpse-like approach generates a dozen versions of completely new compositions.

The hybrid technique allows for a certain degree of unpredictability of visual dynamics. Painterly, organic sentiments reveal themselves amidst the otherwise detached precision of digital drawings. By employing this specific method, the degrees of depth, spatial dimensionality and scalability vary, distort and warp the finer details and overall composition. The drawings are effectively liberated from the restrictive traditions of the Cartesian coordinate system.

The application of this method allows the work to bridge the gap between analogue and digital media as well as between two- and multi-dimensional domains. Compositional techniques imbue the work with the very essence of post-digital constructs beyond the conventional protocol of architectural and artistic formalities. They conjure up synthetic possibilities within which the temporal variations of spatial semiotics emerge as the potential products of alchemical procedures.

Recent work revolves around common themes that are built on the mythology of future cities, with emphasis on the socio-cultural aspects of innovation, resources and planning processes. The wide range of compositional techniques embrace varying scales and juxtapose amorphous and structural forms. They intertwine textures/patterns, oblique projections and visual metamorphoses and are employed to envision the potential scenarios of post-smart cities of the transhuman age. The clusters of bio-based phase-shifting cellular structures enveloped in tactile membranes with tentacle-like sensory systems are dominant components of urban tissues that constantly



Fig. 2: Ryota Matsumoto, *Rapid Gaze Polynomials Embedded in Infinite Variables*, 2016, mixed media on paper, 64 × 70 cm. The self-organisation process of semi-organic urban clusters with their layers of infrastructures.

Fig. 3 (opposite): Ryota Matsumoto, *Those Who Affirm the Spontaneity of Every Event*, 2015, mixed media on paper, 84 × 119 cm. The whirlpool of primordial chaos before the beginning of bio-organic systematisation.







self-organise and cross-fertilise to replicate semi-living urban agglomerations in perpetual motion. They are autonomous, organic entities that regulate their internal environments through the combination of artificial photosynthesis and biofuels. They maintain homeostasis within their own adapted ecosystems, while simultaneously living in symbiosis with pre-existing nature. These biomorphic structures can reconfigure and expand through preprogrammed mutation and somatic cell division in order to meet ever-changing programmatic and economic needs. As time passes, they outgrow the ravaged cities of the past and replace abandoned and dilapidated buildings with their biologically driven multiplying

structures. Consequently, the myriad emerging biotechnologies blur and undermine the fundamental distinction between the natural and the artificial in the visionary cityscape of speculative urbanism.

The paradox, contradiction and distortion of an alternate perception towards time and space have been a constant subject of interest in my drawings, manifested in the visual narratives on conjectural possibilities of urban futures. Furthermore, most of the work is a personal expression meant to merge and transcend the boundaries between architecture and art, two cultural realms that both reflect on and create contemporary society.

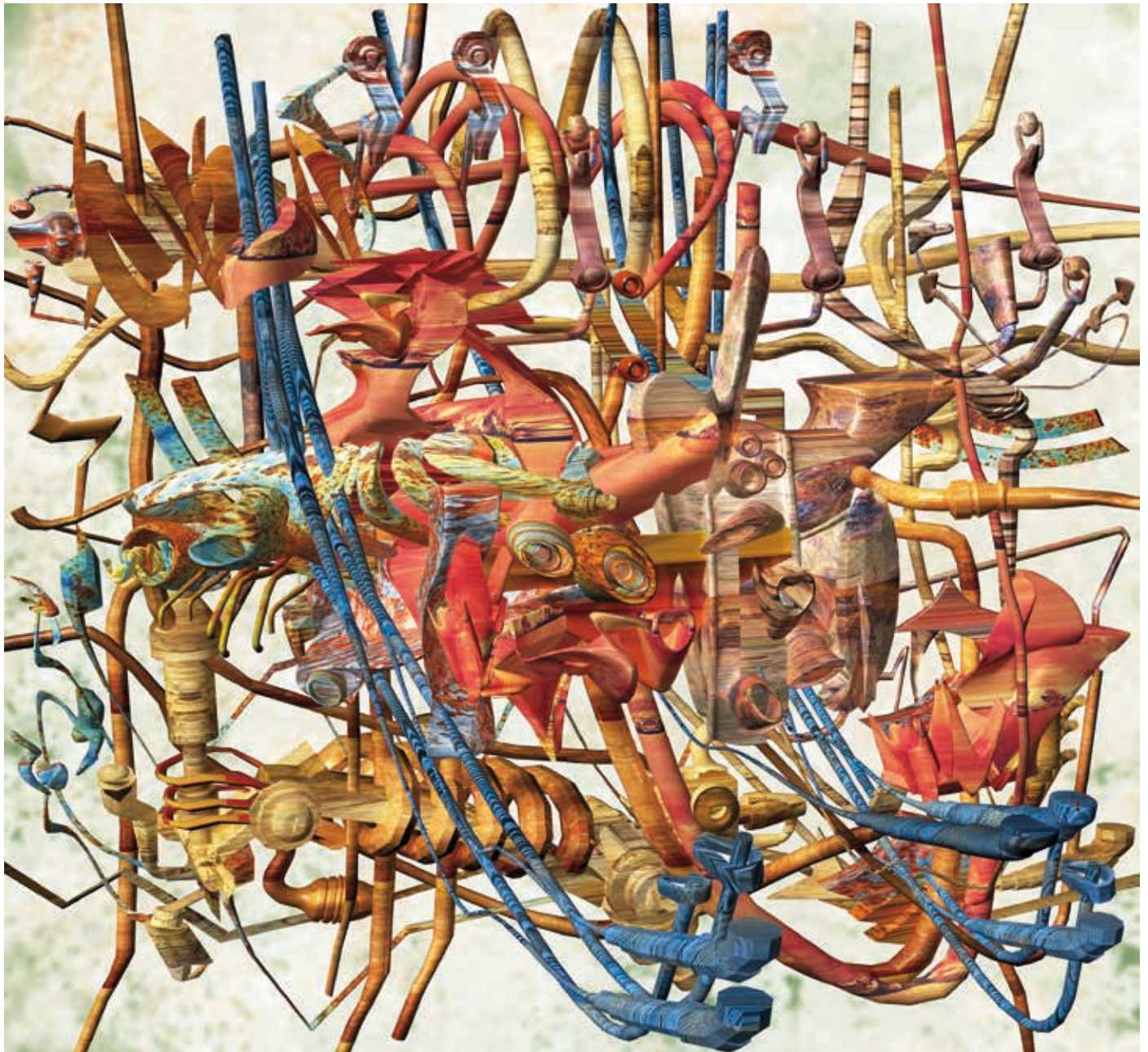


Fig. 4: Ryota Matsumoto, *Swirling Effects and Their Wayside Phenomena*, 2016, mixed media on paper, 67 × 72 cm. The hybrid cellular unit comprised of mechanical and organic elements.





Fig. 5: Ryota Matsumoto, *The Indistinct Notion of an Object Trajectory*, 2015, mixed media on paper, 75 x 56 cm. The stacks of biologically enhanced urban farm towers embedded with multi-functional components.

# Rowhouse

Tom Ngo

When asked the difference between art and architecture during an interview with Charlie Rose in 2001, Richard Serra responded that art was "purposefully useless". Elaborating further, he clarified that architecture could never be art because it was inherently functional, while art, on the other hand, could be freely made without constraint. The crux of his argument lay in the idea that function acted as a hindrance to an architect's ability to create.

In my work, I challenge the idea that art and architecture are mutually exclusive by proposing *function as the architect's medium*. My work attempts to blur the boundaries between utility and purposelessness within architecture. In my drawings, I ask viewers to ignore the operations that occur within spaces and encourage them to consider whether architecture can have as much freedom as art does. The resulting structures attempt to straddle both disciplines, subverting the idea that architecture must be purposeful and proposing, instead, that it can simply be art.

This is illustrated in first project, *Dimhouse*. The aim of this project was to represent the concept of absurdity. Two houses have been stretched and pulled like pieces of dough and doubled over – and the project is named *Dimhouse* as a nod towards this idea. The repetition of

the stretching, pulling and doubling gestures should be emphasized here. Firstly, this reinforces the idea that they are intentional; secondly, it creates an artificial compositional balance, both visually and architecturally; and finally, it obscures programme and presents a level hierarchy of space. As a result, this duplication of spaces represents an intentional blurring of architectural purpose.

This is built upon in the second project, *Rowhouse*. This project reinterprets a rowhouse and situates it within eight rentable units of a self-storage garage. The duplicate structures play off the symmetry of the row house typology, but the rooms within the structure are presented as unprogrammed vessels. However, the aim of this project was not only to present a purposeless space, but to examine it through the rigour of a set of construction documents. Every aspect of the building is annotated and detailed, from general construction notes to building detail sections to door schedules. This brings up several questions. Does the architectural reading of the space change? Does CAD alter the artistic reading of the image? By presenting it as a construction set, does this make the space imaginary or real? Finally, the drawings are screen printed by hand and framed in such a way as to ask the viewer to accept them as art. *Rowhouse* therefore proposes to shift the artful intent away from the presentation of drawings and towards the construction set. This act reinforces the idea of reclaiming functionality as a medium, as well as embracing architecture's own capacity for creating art.



Fig. 1: *Dimhouse 1*, 2013, Coloured pencil and graphite on paper, 28 × 22 in.



Fig. 2: *Dimhouse 2*, 2013, Coloured pencil and graphite on paper, 28 × 22 in.



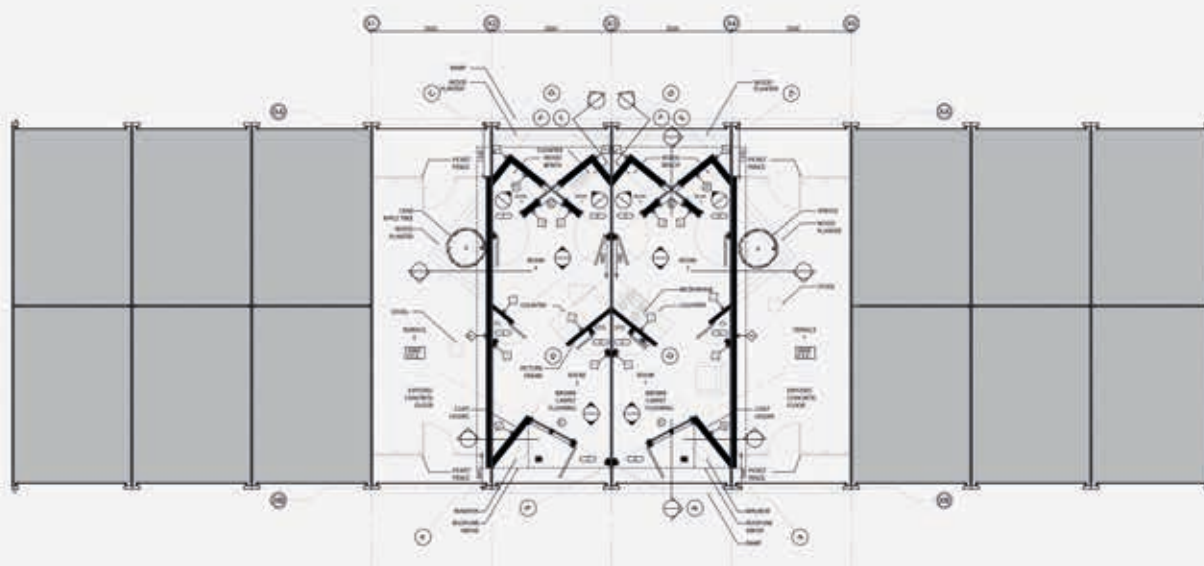


Fig. 3: *Rowhouse – Plan*, 2015, Screen print on paper, 24 × 28 in.



Fig. 4: *Rowhouse – Elevation*, 2015, Screen print on paper, 24 × 28 in.

# Tokyo Backup City IRTBBC

You + Pea

Tokyo IRTBBC was a plan first proposed in 2011 by Hajime Ishii of the Japanese Democratic Party, addressing concerns that Tokyo's current density puts it at mortal risk from natural disasters following the tsunami (of March 2011) and subsequent damage to the Fukushima 1 Power Plant. A group of high-ranking officials proposed a new 'backup city' for Tokyo that would keep the nation running even if its capital stopped.<sup>1</sup> Our 'Tokyo Backup City' proposal is drawn in response to Ishii's 'NEMIC Initiative' (National Emergency Management International City), which floated the Tokyo IRTBBC scheme as a new emergency seat of power. The project would be located in Osaka at a site suggested by Ishii's committee – currently occupied by the domestic Osaka Itami Airport.

The NEMIC proposal calls for construction under the logics of the acronym IRTBBC: *Integrated Resort Tourism Business and Backup City*.<sup>2</sup> Alongside business zones and special amusement areas such as *American Sporty Stadium* and *Euro Healing Palace*, the 'IR' of the project would also introduce American-style gambling 'integrated resorts' to Japan, which are currently illegal.<sup>3</sup> Under this initiative, an ersatz backup Tokyo would be subjugated to the economic and symbolic models of other cultures.

Far from backing-up the characteristics of Tokyo, the NEMIC proposal would sneak in spatial typologies that would profoundly affect the future of Japan both economically and socially. It would be funded by a public-private partnership of the type not currently common in Japan, hurling the country into a new legal turmoil concerning gambling and new financial relationships with the gaming powerhouses of the USA and Asia.

Our project proposes an alternative vision of a backup city for Tokyo that antagonises the gambling resort as a model by utilising the distinctive aesthetics of Japan's own gambling (and religious) culture of 'tokens'.

The drawings are inspired by the luminous colours and hypersaturated landscapes of Japanese arcade 'medal games'. Due to legal restrictions on betting with money, Japanese gamblers exchange currency for tokens (also called medals) that are fed into elaborate miniature architectures, rolling, spinning and cascading through their tiny infrastructures – hopefully towards a prize. Medal games are the mutant cousins of 'coin-pusher' games found in any British seaside arcade; car-sized cabinets holding games of chance where the token tends to do all the real work (Fig. 1).

These games are ubiquitous in Japanese arcades, yet are rather rare to encounter abroad – strange worlds of arcane rules and symbols, as impenetrable as pachinko but with even more booming sounds and lights. To wander through a contemporary gaming arcade in Japan is to experience a sensorial overload at a number

of architectural scales, from the glowing exterior of the building to the repetitious units of game cabinets with their cacophony of light and noise to the tiny spaces and territories within which gambling transactions are enacted through surrogate objects.

In response, our methodology for representing our proposals operates on two levels. Firstly, they are propositions for gamifying the urban realm through gigantic 'medals' that tie together the backup city into a series of interactions between workers commuting to the city and their movement through space. The drawing becomes a way of testing the cause and effect relationship that comes from using the urban realm itself (and the people within it) as a form of *sport* – data footprints and biometrics collapsing the city into a landscape of information.

Secondly, the drawings also represent a critical transcription of arcade medal game cabinets, encoding their language of symbolic elements, ball runs and user-operated mechanisms into a series of full-scale architectural elements. Having observed and recorded



Fig. 1: You + Pea, photo of *Hyozaan!!*, medal game by Sega Japan, 2015. A view into the miniature world of the medal game, photographed at the equally bizarre *Anato No Warehouse* arcade in Kawasaki, Japan.





Fig. 2: You + Pea, *Tokyo IRTBBC: Backup City Birds-eye (detail)*. A detail from the drawing, showing the layering and compositional techniques used to pull the eye across the page of the drawing.

medal games during research trips to Japan, our drawings frame these miniature structures as an architectural typology at a different order of magnitude. The intricate mechanisms of games such as Sega's *Hyozaan!!*, *Galileo Factory* and *Medal Tower of Babel* are revealed and reconstituted through drawing.

Our work juxtaposes drawings and 3D models inspired by recordings of Japanese medal games combined with hand-drawn digital painting. The process involves the overlaying of multiple views and scales and the unusual framing of architectural features to draw the eye across the page in patterns like the token spiralling through the arcade cabinet. As a result, the drawing becomes an intimate reflection of the supersaturated locomotive world of the medal, as well as a schematic for its function as a public building in a backup Tokyo.

We first draw a series of 'medals' woven together into a gamified landscape sited at Itami Airport (Fig. 2). They test the collisions of arcade aesthetics with a condensed version of the Tokyo metropolis. Notable architectures from the metropolis take on new functions in the backup city. A rescaled version of Tange's Tokyo Metropolitan Government Building becomes a data centre for administrative legislation that forms an architectural 'cloud' backup. Shinjuku's infamous 'Piss Alley' of bars and yakitori joints is arrayed into a series of irrigation systems



Fig.3: You + Pea, *Tokyo IRTBBC: Backup City Birds-eye*. Overall view of the Tokyo IRTBBC project, showing the various medal structures as luminous points of interest surrounded by the integrated zone.

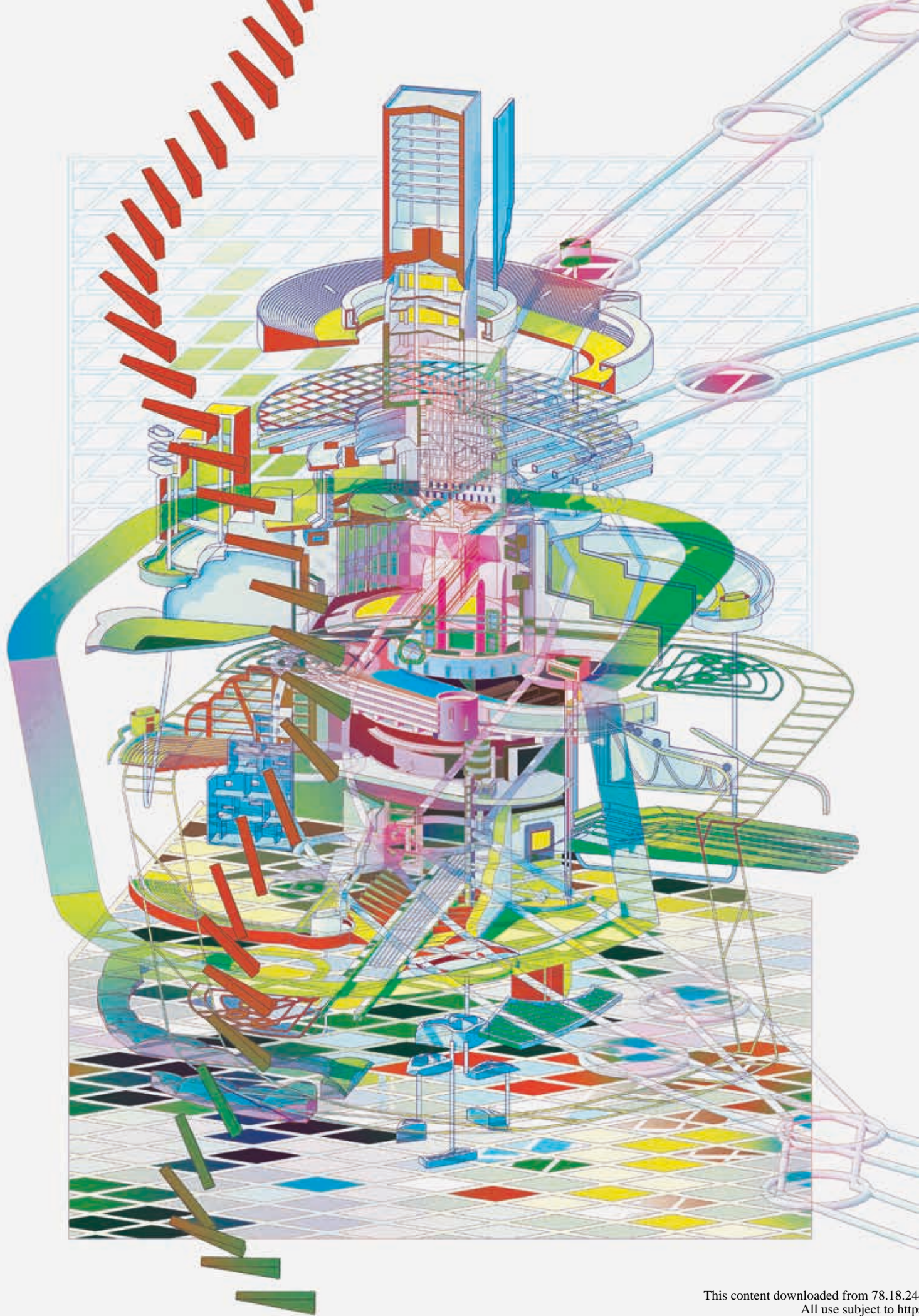
to provide water for the city, and supernatural landscapes such as a reconstructed Mount Takao are punctured with geothermal boreholes that produce hot springs. These moments of architectural archiving are enmeshed into the space of the drawing, woven into the aesthetics of the game (Fig. 3).

Between medals and other significant buildings is the *integrated zone* – residential and commercial structures growing into the gaps of the site, their angular shells articulated by Tokyo's shadow planning laws. The 'colour burn' of Tokyo's neon surfaces is encoded into the drawing to suggest a new city of intensity and friction rather than preconceived zones. In the same way the medal game overwhelms the player to distract them, the drawing overloads the viewer to emphasise a spatial alternative to the NEMIC proposal of anodyne, clearly divided zones of commerce that would define the backup city. Drawing is a zone to test the medal game as an urban planning prototype.

The drawn surface is used as a tool to enmesh speculative ideas, remodellings of typologies, photographic recordings and sketches. These combine together

Fig. 4 (overleaf): You + Pea, *Tokyo IRTBBC: Exploded Medal*, 2016. An exploded view of a sports medal, where the four legalised gambling sports are combined with the infrastructure of the subway station into a pillar of symbolic transactions.







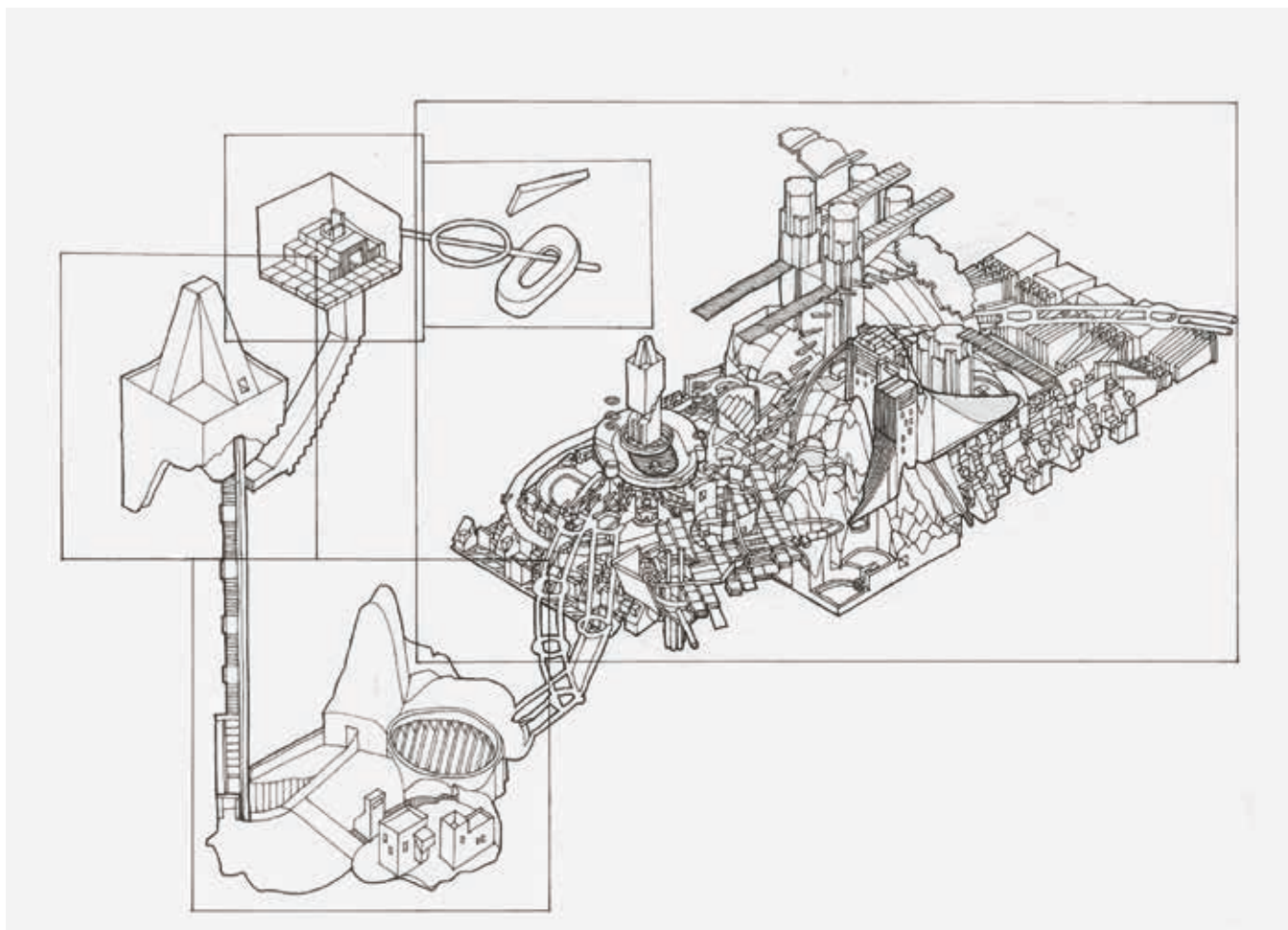


Fig. 5: You + Pea, Tokyo IRTBBC: Sketch studies, 2016. A sketch through space and time within the Backup City, showing the moments encountered by workers and residents at different scales.

into an architectural language that embraces the collisions of traditional tokenism with super-plastic arcade cabinetry. Sketches such as (Fig. 5) explore the landscape at multiple scales, conceiving of the architecture as a journey. Medal games typically work on complex schedules of 'random' events, which are nearly impossible to understand for a novice player, with tokens driven on a tortuous passage through the system by miniature infrastructures. The drawing is a method to explore how people encounter this new form of gamified urbanism as a journey through architectural space.

In Fig. 4, we show a view exploring the inner workings of a skyscraper-scale medal. The structure accommodates the only four legalised gambling sports in Japan: powerboat racing, speedway, keirin cycling and horse racing, extending them by gamifying the interchange of people within the metro station at the heart of the building. People become tokens cascading through the miniscule monuments of the arcade game. Inspired by schematic drawings of arcade cabinets and pinball tables, we explode the medal, revealing logics and speculative mechanisms within the structure.

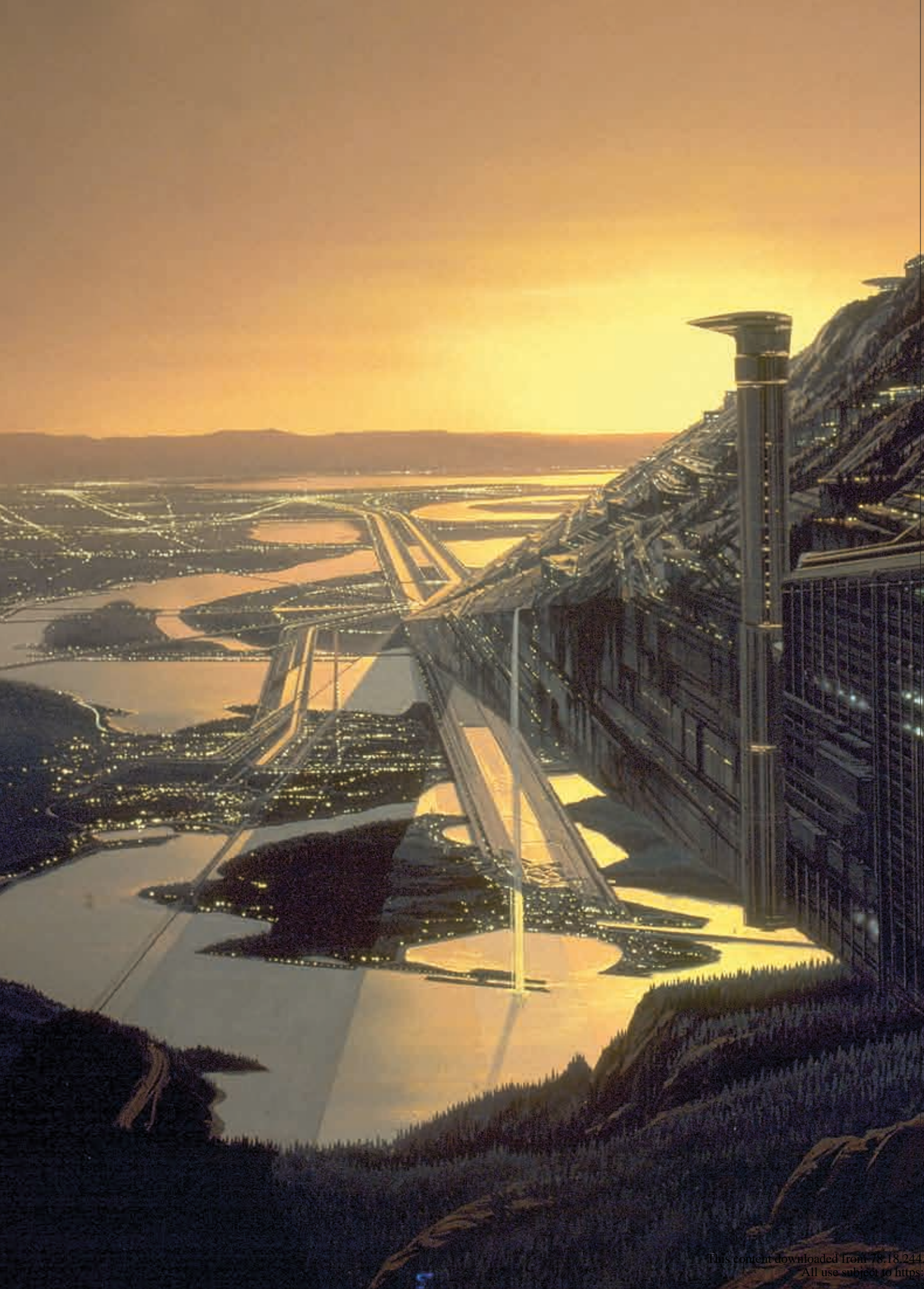
For all their flashing lights, chutes and spinning roulette wheels, there is something inscrutable about medal games – an internalised logic held away from the player.

One often gets a similar feeling walking the streets of Tokyo. By exposing this and using it as a strategy within our drawings, we attempt to reinforce the idea of a backup city that celebrates the inconsistencies and manias of the modern metropolis. The drawings, like medal games – like Tokyo itself – become spaces of bewilderment through their layers of information: a representational riposte to Ishii's idea of a business park backup city trapped in the 24-hour mood lighting of the American casino floor.

<sup>1</sup> "Plug and play... Japan looks at creating world's first backup city", World Architecture News.com, accessed 16 February 2016, <http://www.worldarchitecturenews.com/project/2011/17908/wan-editorial/irtbbc-in-irtbbc.html>.

<sup>2</sup> "NEMIC National Emergency Management International City", NEMIC, accessed 16 February 2016, <http://nemic.org/index.html>.

<sup>3</sup> "NEMIC Park Casino" (translated), NEMIC, accessed 16 February 2016, <http://nemic.org/amusement.html>.







# MEGABEAM

Syd Mead

This illustration was produced for a commission from an advertising agency in Cape Town, South Africa. The idea was to depict mega-projects that would challenge contemporary techniques in architecture, space exploration and extreme climatic adaptation. I created *MEGABEAM* as an architecture project anticipating the future of materials that would allow massive self-supporting structures to serve as habitat.

The construct is anchored at its lowest end at the edge of the bay, with the upper end resting (also anchored) on the top of a small mountain. The hexagonal cross section is a robust choice for this huge structure. Essentially, it is a load-bearing beam large enough to use as a self-contained city. The structure is still in its finishing process, as evidenced by welding light sources visible at its centre, a hoist apparatus manoeuvring a frame section into position and the foreground view of a mobile contractor capsule.

A feature restaurant and club will open in the vertical column and projecting 'hood' shape. The terraces and various transport routes on the vertical and upward-facing exterior surfaces of the *MEGABEAM* provide access to any point. All necessary infrastructure is inside the *MEGABEAM* for utilities, transport links to 'surface' routes and delivery of goods and services to residents. The population would be in the neighbourhood of 6,000 residents. Lifestyle residences would range from extensive terraced 'estates' to view-homes primarily on the two vertical 'side' surfaces.

*MEGABEAM* illustrates an ambitious projection of massive proportions as an engineered reality. It is at once an imaginative idea and a comment on future possibilities in architectural design.

Fig. 1 (previous): Syd Mead, *MEGABEAM*.